



INX International Ink Co.
Corporate Offices
150 N. Martingale Suite 700
Schaumburg, IL 60173
847-290-0302 Phone
8847-981-9447 Fax
www.inxinternational.com

Water Enforcement and Compliance Assurance Branch
US Environmental Protection Agency, Region 5
77 West Jackson Boulevard, (WC-15J)
Chicago, IL 60604-3590
Attention: Newton Ellens

Dear Mr. Ellens,

In response to your information request pursuant to 33USC 1318 of the Clean Water Act, Docket number V-W-14-308-29, INX International Ink Co, West Chicago Branch supplies the following information:

- A. A description of the liquid waste discharged to the West Chicago collection system from November to December 2013
- B. Record of monitoring, observations or inspections of the liquid waste in the Nov-Dec 2013 time frame.
- C. Waste water discharge flow records from July 2009 to present (Our records begin in Jan 2010. Our Waste Water Discharge Permit requiring this record was effective September 1, 2011. Prior to this time the discharge of this effluent was governed by West Chicago Municipal code Sec 18-64.2 See Appendix A)
- D. A list of every ink produced since July 2009 (per your conversation with Duane Ness, this is limited to the inks that contributed to the waste water stream)
- E. A description of the process used to clean our ink tanks and the MSDS for all cleaning agents used.

I certify under penalty of law that this response and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person(s) who manage the system, or those person(s) directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment for knowing violations.,

If additional information is needed or you have any questions, please contact myself or Duane Ness (630-382-1859).

Sincerely,

Todd Dragoo
General Manager,
INX West Chicago Operations
1860 Western Drive
West Chicago, IL 60185
630-681-7232
Todd.dragoo@inxintl.com

Headquartered in Schaumburg, Illinois INX International Ink Co. is the third largest producer of ink in North America and a global supplier as part of Sakata INX worldwide operations. We are an industry leader offering a full line of ink and coating solutions technology for packaging and commercial print applications. Our products solutions focus on metal decorating, flexographic, gravure, web offset, lamination, corrugated, sheetfed, inkjet and UV/EB inks and coatings.

RECEIVED
October 10, 2014

OCT 16 2014

WATER ENFORCEMENT & COMPLIANCE
ASSURANCE BRANCH, EPA, REGION 5



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**Information Request Pursuant to 33 U.S.D § 1381 of the Clean Water Act,
Docket No. V-W-14-308-29**

Request A.

A description of the liquid water you discharged to the West Chicago Collection System for each day from November to December 2013, including a written description of the process or processes discharging liquid waste, volume, and color (if applicable)

Response for A: A description of the liquid waste you discharged to the West Chicago collections system for each day from November to December 2013, including a written description of the process or processes discharging liquid waste, volume and color (if applicable)

Description of Liquid Waste Discharged To the West Chicago Collection System During November 2013

Equipment Source of Water	Descriptive Name	Process Description of Source Water	Contact With Ink or Ink Precursors?	Requires Treatment?	Point of Treatment	Type of Treatment	Discharge Point	Discharged Quality	Discharged Color
FL-61	Yellow Flusher	Water removed from wet pigment (press cake) during flushing process by the addition of varnish to the press cake. The added varnish used to coat the pigment is hydrophobic and it drives water off the pigment. Additional water is added to the pigment during the flushing process to reduce the conductivity of the flush. Flush is a concentrate of pigment in a petroleum based oleo-resinous varnish.	Yes	Yes	TK-123, Z-100	Water blended with water from FL-71, FL-81, FL-91, VP-91 and mop water. Treatment - pH Adjustment with NaOH, settlement of suspended solids, oil removal	Process Sanitary	See 12/12/13 Out Fall Grab Sample Test Report	Light Brown
FL-71	Blue Flusher	Out of service during the month of November 2013							
FL-81	Blue Flusher	Water removed from wet pigment (press cake) during flushing process by the addition of varnish to the press cake. The added varnish used to coat the pigment is hydrophobic and it drives water off the pigment. Additional water is added to the pigment during the flushing process to reduce the conductivity of the flush. Flush is a concentrate of pigment in a petroleum based oleo-resinous varnish.	Yes	Yes	TK-123, Z-100	Water blended with water from FL-71, FL-61, FL-91, VP-91 and mop water. Treatment - pH Adjustment with NaOH, settlement of suspended solids, oil removal	Process Sanitary	See 12/12/13 Out Fall Grab Sample Test Report	Light Brown
FL-91	Red Flusher	Water removed from wet pigment (press cake) during flushing process by the addition of varnish to the press cake. The added varnish used to coat the pigment is hydrophobic and it drives water off the pigment. Additional water is added to the pigment during the flushing process to reduce the conductivity of the flush. Flush is a concentrate of pigment in a petroleum based oleo-resinous varnish.	Yes	Yes	TK-123, Z-100	Water blended with water from FL-71, FL-81, FL-91, VP-11 and mop water. Treatment - pH Adjustment with NaOH, settlement of suspended solids, oil removal	Process Sanitary	See 12/12/13 Out Fall Grab Sample Test Report	Light Brown
VP-61	Vacuum Pump	Water and VOCs are evaporated from the flush during vacuum phase with the goal of reducing the water content of the flush to near zero. This is done by pulling a vacuum on the flusher chamber and allowing the water to boil off.	Yes	Yes	TK-122, Z-100	pH Adjustment with NaOH, settlement of suspended solids, oil removal	Process Sanitary	See 12/12/13 Out Fall Grab Sample Test Report	Light Brown Tint
VP-71	Vacuum Pump	Water and VOCs are evaporated from the flush during vacuum phase with the goal of reducing the water content of the flush to near zero. This is done by pulling a vacuum on the flusher chamber and allowing the water to boil off.	Yes	Yes	TK-122, Z-100	Water blended with other process water that receives pH adjustment with NaOH, settlement of suspended solids, oil removal	Process Sanitary	See 12/12/13 Out Fall Grab Sample Test Report	Light Brown Tint

INX West Chicago Water Treatment Chemical Details for Boilers and Cooling Tower.

Supplement for Request A.

Boiler Water Contains the following chemical treatments (BO-01 and BO-02)	<p>132 Boiler Water Treatment: No hazardous components. Main ingredient: Sodium Sulfite Dosage with properly operating Steam De-aerator is 4 ounces per 1000 gallons make up.</p> <p>B-121 Boiler Water Treatment: No hazardous components. Main Ingredient: AA/AMPS polymer. Dosage with RO makeup: 2 ounces per 1000 gallons make up</p> <p>B-102C Boiler Water Treatment: Hazardous component Sodium Hydroxide (CAS# 1310-73-2). Main ingredient Sodium Hydroxide 25% solution. Dosage with RO makeup 0.25 ounces per 1000 gallons makeup.</p> <p>S-80 Condensate Treatment. Hazardous components: Ethanol -2-diethylamino (CAS # 100-37-8), Morpholine (CAS # 110-91-8), Cyclohexylamine (CAS # 108-91-8). Main Ingredients a 20% solution of the above ingredients and 80% DI water. Dosage with RO make up: 0.20 ounces per 1000 gallons make up direct steam injection.</p>
Cooling tower water contains the following chemical treatments (CT101, PC102A&B)	Contains Algaecide/Biocides. EPA numbers A44 and A26. A-44 Algaecide. 15% Glutaraldehyde (EPA Est. No. 11617-IL-1). Dosage ½ pint (8 ounces) every other week. Slug fed A-26 Algaecide. 3.68% Disodium Cyanodithioimidocarbonate, 5.07% Potassium N-Methyldithiocarbamate , EPA Est. No. 11617-IL-1. Dosage 1 pint (16 ounces) every other week. Slug fed

INX

INX International Ink Co.

Information Request Pursuant to 33 U.S.D § 1381 of the Clean Water Act,
Docket No. V-W-14-308-29

Request B.

Submit any records that you have of monitoring, observations or inspections of the liquid waste that you discharged each day from November to December 2013.

In 2 parts:

B1 our records

B2 the records from the external test agency (Test America)

Standard Methods 4500 H+B

PROJECT NO.

31

TITLE: BP

BOOK NO.

2013

Work continued from Page

DATE	TANK	Buffer	pH In	pH Out	Cond	NaOH	Temp	Int'l	Comments
10/2	y/10	6.99	6.15	6.15	1000	—	85.4	CO ₂	
10/2	RED	6.99	5.57	6.40	3800	5-m	90.8	CO ₂	
10/3	y/10	7.00	5.67	6.51	1000	—	90.0	CO ₂	
10/3	RED	7.00	4.99	6.39	4500	23-m	90.0	CO ₂	300 mL of 25% Sodium Hyd
10/7	y/10	7.00	6.00	6.00	500	—	88.3	CO ₂	
10/7	RED	7.00	5.54	6.32	4000	7-m	87.8	CO ₂	
10/8	y/10	7.00	6.10	6.10	900	—	88.9	CO ₂	
10/8	RED	7.00	5.15	6.50	3500	11-m	87.2	CO ₂	Drained with y/10
10/9	y/10	7.00	5.30	6.08	1200	—	88.3	CO ₂	400 mL of 25% Sodium Hyd
10/9	RED	7.00	5.00	6.21	4400	23-m	85.6	CO ₂	Drained with y/10
10/10	y/10	7.00	5.93	7.15	1200	—	85.7	CO ₂	50mL of 25% Sodium Hyd
10/10	RED	7.00	5.04	8.46	4000	22-m	91.5	CO ₂	
10/14	y/10	7.00	6.10	6.10	1000	—	85.6	CO ₂	
10/14	RED	7.00	5.13	6.18	4200	15-m	87.7	CO ₂	Drained with y/10
10/15	y/10	7.00	6.11	6.11	1000	—	86.2	CO ₂	
10/15	RED	7.00	5.13	6.12	4800	21-m	87.0	CO ₂	
10/16	RED	7.00	5.15	6.36	3800	16-m	85.4	CO ₂	
10/17	RED	7.01	5.14	6.54	3600	14-m	93.0	CO ₂	
10/18	y/10	7.01	6.10	6.10	400	—	87.0	CO ₂	
10/21	RED	7.01	4.90	6.44	4400	43-m	83.0	CO ₂	
10/21	y/10	7.01	6.04	6.04	500	—	86.3	CO ₂	
10/23	RED	6.99	5.22	7.88	3000	12-m	82.8	CO ₂	
10/23	y/10	6.99	6.10	6.10	700	—	86.4	CO ₂	Drained with RED
10/24	RED	7.00	5.18	6.02	3400	14-m	83.0	CO ₂	
10/24	y/10	7.00	5.24	6.07	1000	—	87.3	CO ₂	400 mL 25% Sodium Hyd
10/25	RED	6.99	4.99	6.08	4800	36-m	83.8	CO ₂	
10/25	y/10	6.99	5.49	6.55	900	—	86.2	CO ₂	350 mL 25% Sodium Hyd
10/28	RED	7.01	5.40	8.76	3400	18-m	87.2	EB	
10/28	y/10	7.01	5.72	6.40	700	—	84.0	EB	250 mL 25% Sodium Hyd
10/30	RED	7.00	4.98	6.62	4600	33-m	85.4	CO ₂	
10/30	y/10	7.00	6.85	6.85	500	—	84.0	CO ₂	Drained with RED
10/31	RED	6.99	5.21	6.77	4000	33-m	86.9	CO ₂	
11/1	RED	6.99	5.23	8.28	3000	12-m	84.5	CO ₂	

SCIENTIFIC INDUSTRY PRODUCTIONS CHICAGO 68603

Work continued to Page

SIGNATURE

DATE

DISCLOSED TO AND UNDERSTOOD BY

DATE

WITNESS

DATE

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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Continuation on page(s) _____ of _____ page(s). Work continued to Page _____

DATE

Cleanned oil water separator and emptied tank cones 11/2/13

PROJECT NO.

33

TIME

Standard Methods 4500 H+B

BOOK NO.

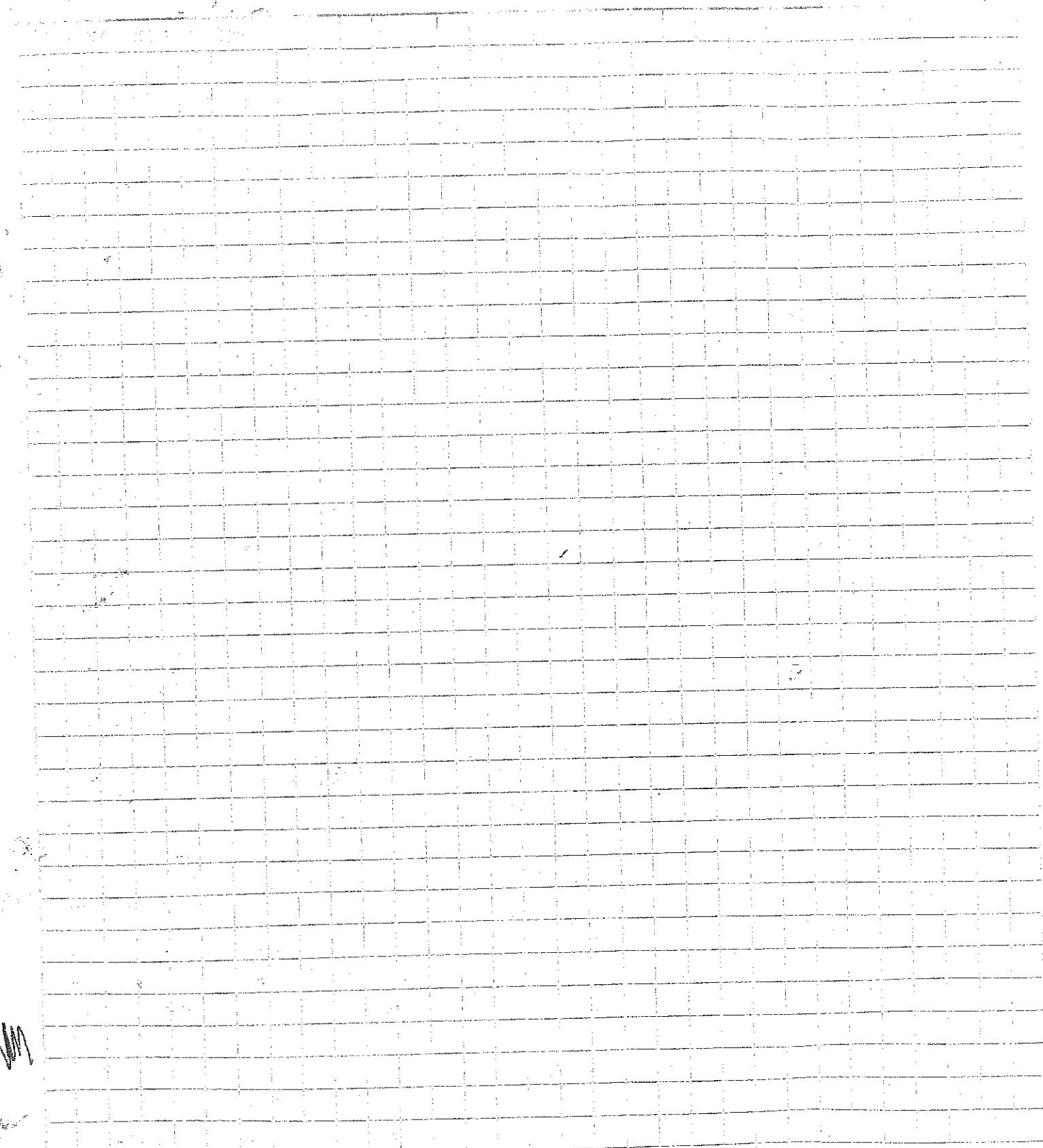
2013

DATE	TANK	BUFFER	pH IN	pH OUT	COND	NAOH	TEMP	INTL	COMMENTS
11/4	y/0	7.00	5.95	6.05	600	—	81.7	CF	50 mL 25% Sodium Hyd
11/4	RED	7.00	5.90	6.57	1400	3-m	81.3	CF	
11/5	y/0	7.00	6.24	6.24	1100	—	82.3	CF	
11/5	RED	7.00	4.82	6.05	3000	18-m	82.6	CF	
11/6	y/0	7.00	6.55	6.55	900	—	83.7	CF	Drained with RED
11/6	RED	7.00	5.60	6.89	4200	6-m	83.9	CF	
11/7	RED	7.00	5.55	6.76	3400	5-m	87.2	CF	
11/8	y/0	7.00	6.33	6.33	700	—	85.0	CF	
11/8	RED	7.00	5.68	6.20	2200	2-m	91.0	CF	Drained with Kyle
11/11	RED	6.99	5.04	6.32	3500	16-m	82.0	CF	
11/11	y/0	6.99	6.10	6.10	500	—	84.0	CF	Drained with RED
11/12	RED	7.00	5.95	6.40	3900	2-m	83.9	CF	
11/12	y/0	7.00	6.12	6.12	400	—	82.7	CF	Drained with RED
11/13	RED	7.00	4.95	8.50	2800	22-m	88.9	CF	
11/14	y/0	7.00	6.15	6.15	600	—	82.5	CF	
11/15	y/0	7.00	6.10	6.10	700	—	81.5	CF	
11/18	y/0	7.00	6.05	6.05	500	—	80.7	CF	
11/18	RED	7.00	5.06	6.04	4000	21-m	83.5	CF	Drained with y/0
11/19	RED	7.00	5.00	6.24	4500	25-m	86.2	CF	
11/19	y/0	7.00	5.73	8.55	1000	—	87.5	CF	250 mL of 50% Hyd
11/21	y/0	7.00	5.58	6.53	700	—	81.6	CF	300 mL of 25% Sod Hyd
11/21	RED	7.00	4.96	6.27	4800	31-m	87.0	CF	
11/22	y/0	7.00	6.15	6.15	600	—	86.5	CF	
11/26	y/0	7.00	6.65	6.65	600	—	81.2	CF	
12/2	RED	7.00	5.39	8.13	3400	14-m	76.4	CF	
12/2	y/0	7.00	5.48	6.50	900	—	76.7	CF	350 mL 25% Sodium Hyd
12/3	RED	7.00	5.42	8.40	2700	10-m	78.0	CF	
12/3	y/0	7.00	5.64	6.88	900	—	80.8	CF	300 mL 25% Sodium Hyd
12/4	y/0	6.99	6.07	6.07	700	—	83.7	CF	
12/5	RED	7.00	5.18	6.43	3500	18-m	81.5	CF	
12/5	y/0	7.00	5.76	6.48	700	—	83.3	CF	250 mL 25% Sodium Hyd
12/6	y/0	7.01	5.54	6.24	1000	—	78.4	CF	300 mL 25% Sod Hyd

Grab Sample 4 50ml

New conditions on page

Annual
Test



REVIEWER
SUBMITTED AND APPROVED

Standard Methods 4500 H+B

35

2013 & 2014

DATE	TANK	Buffer	pH IN	pH OUT	Conc	NaOH	Temp	Int'l	Comments
12/10	y/10	6.99	6.46	6.46	1000	—	78.3	CF	
12/13	RED	7.01	5.17	6.45	4500	27-m	74.5	CF	Drained with y/10
12/13	y/10	7.01	5.77	6.32	1500	—	79.3	CF	300 ml 25% NaOH
12/16	RED	7.00	5.37	6.13	4800	23-m	74.1	CF	Drained with y/10
12/16	y/10	7.00	5.62	6.06	1800	—	76.8	CF	350 ml 25% NaOH
12/17	RED	7.01	5.37	6.01	4800	26-m	74.1	CF	
12/17	y/10	7.01	6.65	6.65	1700	—	93.0	CF	Drained with RED
12/18	RED	7.00	5.25	6.02	4800	37-m	80.4	CF	
12/18	y/10	7.00	6.18	6.18	1200	—	84.2	CF	Drained with RED
12/20	RED	7.01	5.23	8.15	4000	25-m	86	EB	Drained with y/10
12/20	y/10	7.01	6.65	6.65	1100	—	80.3	EB	
12/23	RED	7.00	5.02	8.20	3500	35-m	78.0	EB	
12/26	y/10	7.01	6.81	6.81	1000	—	73.4	EB	
12/26	RED	7.01	5.02	6.54	3800	25-m	74.0	EB	
12/31	RED	7.00	5.02	6.70	3600	23-m	77	EB	
1/3/1	YELL	7.00	6.93	6.91	800	—	75.3	EB	
1/2	YELL	7.00	6.55	6.55	800	—	76.2	EB	
1/2	RED	7.00	5.32	6.10	3200	10-m	75	EB	
1/3	RED	7.00	5.48	6.92	3200	10-m	75.0	CF	
1/3	y/10	7.00	6.45	6.45	800	—	78.0	CF	
1/6	y/10	7.00	6.22	6.22	500	—	74.8	CF	
1/6	RED	7.00	5.34	6.36	3700	14-m	74.0	CF	Drained with y/10
1/7	RED	6.99	6.34	6.34	4400	—	73.0	EB	
1/7	y/10	6.99	6.07	6.07	500	—	73.0	CF	
1/8	RED	7.00	5.97	6.59	2000	2-m	86.7	CF	
1/8	y/10	7.00	6.05	6.05	500	—	76.7	CF	
1/9	RED	7.00	4.89	8.83	3400	21-m	82.3	CF	
1/13	RED	7.00	5.30	8.40	4500	18-m	78.8	CF	
1/13	y/10	7.00	6.05	6.05	400	—	79.4	CF	
1/14	RED	7.01	5.49	6.03	3700	7-m	80.1	CF	
1/14	y/10	7.01	6.35	6.35	400	—	81.5	CF	
1/15	RED	7.00	5.56	8.15	2500	5-m	80.0	CF	
1/15	y/10	7.00	5.80	7.25	300	—	87.3	CF	100ml 25% NaOH

SCIENTIFIC EQUIPMENT DIVISION CHICAGO 6-1818

Work continued on page

Signature

Date

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Chicago

2417 Bond Street

University Park, IL 60484

Tel: (708)534-5200

TestAmerica Job ID: 500-68152-1

Client Project/Site: Semi Annual Testing

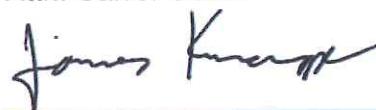
For:

Inx International Ink Co.

1760 Western

West Chicago, Illinois 60185

Attn: Carroll Gould



Authorized for release by:

12/12/2013 4:45:58 PM

Jim Knapp, Project Manager II

(708)534-5200

jim.knapp@testamericainc.com

LINKS

Review your project
results through

Total Access

Have a Question?



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www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Narrative

Job Narrative
500-68152-1

Comments

No additional comments.

Receipt

The sample was received on 12/6/2013 3:59 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.3° C.

Metals

Method(s) 245.1: The continuing calibration verification (CCV) at line 19 in AD batch 215636 recovered above the upper control limit for Hg. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data has been reported.

No other analytical or quality issues were noted.

General Chemistry

No analytical or quality issues were noted.

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Copper	0.035		0.0050		mg/L	1		200.7 Rev 4.4	Total Recoverable
Zinc	0.082		0.010		mg/L	1		200.7 Rev 4.4	Total Recoverable
Barium	0.034		0.0050		mg/L	1		200.7 Rev 4.4	Total Recoverable
Total Dissolved Solids	2100		10		mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	35		5.0		mg/L	1		SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

Method	Method Description	Protocol	Laboratory
200.7 Rev 4.4	Metals (ICP)	EPA	TAL CHI
245.1	Mercury (CVAA)	EPA	TAL CHI
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL CHI
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL CHI

5

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater".

Laboratory References:

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Lab Sample ID 500-68152-1	Client Sample ID Grab Sample	Matrix Water	Collected 12/06/13 09:10	Received 12/06/13 15:59
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14

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	0.036		0.0050		mg/L		12/10/13 08:00	12/10/13 23:15	1
Zinc	0.082		0.010		mg/L		12/10/13 08:00	12/10/13 23:15	1
Barium	0.034		0.0050		mg/L		12/10/13 08:00	12/10/13 23:15	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	^	0.20		ug/L		12/09/13 16:00	12/10/13 09:01	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	2100		10		mg/L		12/10/13 22:51		1
Total Suspended Solids	35		5.0		mg/L		12/07/13 12:13		1

Qualifier	Qualifier Description	1
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC exceeds the control limits.	2
Qualifier	Qualifier Description	3
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.	4
Abbreviation	These commonly used abbreviations may or may not be present in this report.	5
%	Listed under the "D" column to designate that the result is reported on a dry weight basis	6
%R	Percent Recovery	7
CNF	Contains no Free Liquid	8
DER	Duplicate error ratio (normalized absolute difference)	9
Dil Fac	Dilution Factor	10
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	11
DLC	Decision level concentration	12
MDA	Minimum detectable activity	13
EDL	Estimated Detection Limit	14
MDC	Minimum detectable concentration	15
MDL	Method Detection Limit	16
ML	Minimum Level (Dioxin)	17
NC	Not Calculated	18
ND	Not detected at the reporting limit (or MDL or EDL if shown)	19
PQL	Practical Quantitation Limit	20
QC	Quality Control	21
RER	Relative error ratio	22
RL	Reporting Limit or Requested Limit (Radiochemistry)	23
RPD	Relative Percent Difference, a measure of the relative difference between two points	24
TEF	Toxicity Equivalent Factor (Dioxin)	25
TEQ	Toxicity Equivalent Quotient (Dioxin)	26

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-68152-1	Grab Sample	Total/NA	Water	245.1	
LCS 500-215499/13-A	Lab Control Sample	Total/NA	Water	245.1	
MB 500-215499/12-A	Method Blank	Total/NA	Water	245.1	

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Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-68152-1	Grab Sample	Total Recoverable	Water	200.7	
LCS 500-215604/2-A	Lab Control Sample	Total Recoverable	Water	200.7	
MB 500-215604/1-A	Method Blank	Total Recoverable	Water	200.7	

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Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-68152-1	Grab Sample	Total/NA	Water	245.1	215499
LCS 500-215499/13-A	Lab Control Sample	Total/NA	Water	245.1	215499
MB 500-215499/12-A	Method Blank	Total/NA	Water	245.1	215499

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Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-68152-1	Grab Sample	Total Recoverable	Water	200.7 Rev 4.4	215604
LCS 500-215604/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	215604
MB 500-215604/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	215604

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-68152-1	Grab Sample	Total/NA	Water	SM 2540D	
LCS 500-215318/2	Lab Control Sample	Total/NA	Water	SM 2540D	
MB 500-215318/1	Method Blank	Total/NA	Water	SM 2540D	

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-68152-1	Grab Sample	Total/NA	Water	SM 2540C	
500-68152-1 DU	Grab Sample	Total/NA	Water	SM 2540C	
500-68152-1 MS	Grab Sample	Total/NA	Water	SM 2540C	
LCS 500-215711/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 500-215711/1	Method Blank	Total/NA	Water	SM 2540C	

Analyte	MB MB		Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	ND	0.0050									
Copper											
Zinc											
Barium											
<hr/>											
Analyte	Spike LCS LCS		Added	Result	Qualifier	Unit	D	%Rec	Limits		
	0.125	0.128	mg/L	102	85 - 115						
Copper											
Zinc											
Barium											
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Analyte	MB MB		Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	ND	^			0.20		ug/L				
Mercury											
<hr/>											
Analyte	Spike LCS LCS		Added	Result	Qualifier	Unit	D	%Rec	Limits		
	2.00	2.20	ug/L	110	85 - 115						
Mercury											
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Analyte	MB MB		Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	ND	^			10		mg/L				
Total Dissolved Solids											
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Analyte	Spike LCS LCS		Added	Result	Qualifier	Unit	D	%Rec	Limits		
	250	256	mg/L	102	80 - 120						
Total Dissolved Solids											

QC Sample Results

Client: Inx International Ink Co.
Project/Site: Semi Annual Testing

TestAmerica Job ID: 500-68152-1

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: 500-68152-1 MS

Matrix: Water

Analysis Batch: 215711

Client Sample ID: Grab Sample

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec.
Total Dissolved Solids	2100		250	2310	4	mg/L		98	75 - 125

Lab Sample ID: 500-68152-1 DU

Matrix: Water

Analysis Batch: 215711

Client Sample ID: Grab Sample

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	2100		2000		mg/L		3	5

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 500-215318/1

Matrix: Water

Analysis Batch: 215318

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		5.0		mg/L			12/07/13 11:40	1

Lab Sample ID: LCS 500-215318/2

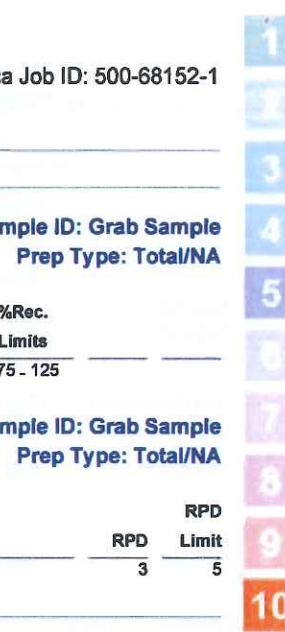
Matrix: Water

Analysis Batch: 215318

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
Total Suspended Solids	200	198		mg/L		99	80 - 120



TestAmerica Chicago

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Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	245.1			215499	12/09/13 16:00	BJB	TAL CHI
Total/NA	Analysis	245.1		1	215636	12/10/13 09:01	RLL	TAL CHI
Total Recoverable	Prep	200.7			215604	12/10/13 06:00	MJP	TAL CHI
Total Recoverable	Analysis	200.7 Rev 4.4		1	215718	12/10/13 23:15	LEG	TAL CHI
Total/NA	Analysis	SM 2540D		1	215318		BIS	TAL CHI
				(Start)	12/07/13 12:13			
				(End)	12/07/13 12:16			
Total/NA	Analysis	SM 2540C		1	215711	12/10/13 22:51	CLB	TAL CHI

Laboratory References:

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40461	04-30-14
California	NELAP	9	01132CA	04-30-14
Georgia	State Program	4	N/A	04-30-14
Hawaii	State Program	9	N/A	04-30-14
Illinois	NELAP	5	100201	04-30-14
Indiana	State Program	5	C-IL-02	04-30-14
Iowa	State Program	7	82	05-01-14
Kansas	NELAP	7	E-10161	10-31-14
Kentucky	State Program	4	90023	12-31-13
Kentucky (UST)	State Program	4	66	04-30-14
Louisiana	NELAP	6	30720	06-30-14
Massachusetts	State Program	1	M-IL035	06-30-14
Mississippi	State Program	4	N/A	04-30-14
North Carolina DENR	State Program	4	291	12-31-13 *
North Dakota	State Program	8	R-194	04-30-14
Oklahoma	State Program	6	8908	08-31-14
South Carolina	State Program	4	77001	04-30-14
Texas	NELAP	6	T104704252-09-TX	02-28-14
USDA	Federal		P330-12-00038	02-06-15
Wisconsin	State Program	5	999580010	08-31-14
Wyoming	State Program	8	8TMS-Q	04-30-14

* Expired certification is currently pending renewal and is considered valid.

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Login Sample Receipt Checklist

Client: Inx International Ink Co.

Job Number: 500-68152-1

Login Number: 68152

List Source: TestAmerica Chicago

List Number: 1

Creator: Kelsey, Shawn M

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Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.3c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	



INX International Ink Co.

**Information Request Pursuant to 33 U.S.D § 1381 of the Clean Water Act,
Docket No. V-W-14-308-29**

Request C.

All wastewater discharge flow records from July 2009 to the present.

Note that we did not collect volume/flow records prior to January 2010. A copy of the WCO Sewer Ordinance in effect at the time (copy attached) did not require this. Records from January 2010 to present are attached.

C. Waste water discharge flow records from January 2010 to present

Date	Non-RCRA Waste Liquid Internal Treat (lb)
Jan-10	388,800
Feb-10	420,836
Mar-10	388,800
Apr-10	417,030
May-10	410,073
Jun-10	388,800
Jul-10	414,335
Aug-10	505,166
Sep-10	430,018
Oct-10	414,861
Nov-10	388,800
Dec-10	424,442
Jan-11	388,800
Feb-11	388,800
Mar-11	388,800
Apr-11	388,800
May-11	388,800
Jun-11	388,800
Jul-11	388,800
Aug-11	388,800
Sep-11	388,800
Oct-11	388,800
Nov-11	388,800
Dec-11	389,997

Date	Non-RCRA Waste Liquid Internal Treat (lb)
Jan-12	0
Feb-12	183,600
Mar-12	151,200
Apr-12	151,200
May-12	270,000
Jun-12	280,800
Jul-12	205,200
Aug-12	194,400
Sep-12	129,600
Oct-12	280,800
Nov-12	162,000
Dec-12	270,000
Jan-13	291,600
Feb-13	248,400
Mar-13	302,400
Apr-13	334,800
May-13	313,200
Jun-13	324,000
Jul-13	345,600
Aug-13	313,200
Sep-13	280,800
Oct-13	367,200
Nov-13	270,000
Dec-13	259,200
Jan-14	378,000
Feb-14	270,000
Mar-14	259,200
Apr-14	226,800
May-14	237,600
Jun-14	162,000
Jul-14	194,400
Aug-14	162,000

Standard Methods 4500 H+B

"C"

TITLE

WASTEWATER 2012

Work continued from Page

MIN. °F

25% NaOH; 60' = 8 GAL.

DATE	PART	BUFFER	pH IN	°D	NaOH ADD	TEMP	pH OUT	INITIAL	
1/3	RED	7.00	5.0	1000	6	74	6.15	RC	NO SLURRY
1/4	RED	6.91	5.1	950	10	78	8.6	RC	
1/5	RED	6.98	4.86	900	10	82	8.3	RC	
1/6	RED	6.99	4.68	4300	32	81	6.5	RC	DRAINED w/YLO COND = 2300
1/9	RED	7.02	6.11	1000	-	80	6.11	RC	
1/11	RED	7.00	4.80	4000	29	79	6.1	RC	DRAINED w/YLO COND = 1800
1/11	YLO	7.01	8.75	1500	-	77	8.75	RC	
1/13	RED	7.0	4.76	5000	30	88	6.1	RC	DRAINED w/YLO, COND = 2400
1/16	RED	6.91	4.8	5000	45	86	6.65	RC	DRAINED w/YLO COND = 2100
1/18	RED	6.98	5.8	1400	3	91	6.8	RC	
1/20	YLO	6.98	6.15	700	-	82	6.15	RC	
1/23	RED	6.97	4.76	4800	30	82°F	6.39°C		Drained w/YLO Cond = 2600
1/24	RED	7.02	4.92	4500	30	85°F	7.85°C		Drained w/YLO Cond = 2400
1/25	YLO	6.91	6.15	800	-	83	6.15	RC	
1/26	RED	6.98	4.94	3500	22	82°F	7.66°C		
1/27	RED	7.03	4.76	5000	30	85.6°F	6.10°C		
1/30	RED	6.99	4.80	3400	20	81.2°F	6.05°C		Drained w/YLO Cond 2600
2/3	RED	6.98	4.64	4800	38	93°F	8.90°C		
2/2	RED	6.96	4.61	6000	53	92	6.2	RC	DRAINED w/YLO 6 GAL OIL OFF
2/7	RED	6.91	4.75	4800	40	85	8.6	RC	DRAINED w/YLO
2/8	RED	6.98	4.79	6000	45	89	7.5	RC	DRAINED w/YLO, COND = 3200
2/10	YLO	6.98	6.3	300	-	83	6.3	RC	
2/13	RED	6.91	4.7	5000	45	84	8.2	RC	DRAINED w/YLO, COND = 3100
2/14	RED	6.99	4.78	3200	25	81.5	6.9	RC	
2/17	RED	6.96	4.96	3000	20	84	8.4	RC	
2/19	YLO	6.95	6.15	900	-	77	6.15	RC	
2/20	RED	6.98	4.80	2500	22	72°F	8.98°C		Drained w/YLO Cond 2500
2/21	RED	6.97	4.66	1800	20	82	6.5	RC	
2/22	RED	6.91	4.85	1200	12	82	6.2	RC	
2/23	RED	6.96	4.78	8000	45	85	8.8	RC	DRAINED w/YLO, COND = 3800
2/24	BLUE	6.95	6.14	800	-	85	6.14	RC	

PLANTCRAFT INDUSTRIES PRODUCTION CHICAGO AREA

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DATE	TANK	BUFFER	pH IN COND.	NaOH	TEMP	pH OUT INITIAL	
2/24	RED	6.97	5.82	1400	4	93	7.1 RC
2/27	RED	6.97	4.7	2500	15	81	6.14 RC
3/4	RED	6.96	5.4	1500	7	89	6.7 RC
3/1	RED	7.00	5.1	3200	20	91	6.1 RC
3/2	RED	7.10	4.91	4000	30	80°F	8.72 C 25
3/5	RED	7.00	4.9	4500	30	82	6.6 RC
3/7	RED	7.00	5.6	1400	4	83	6.9 RC
3/8	RED	7.01	5.1	4500	25	91	8.6 RC
3/12	RED	7.00	5.1	3500	20	83	6.3 RC
3/14	RED	7.00	4.98	3500	20	87	6.6 RC
3/20	RED	7.06	5.00	5000	30	90	6.2 RC
3/21	RED	7.01	5.03	4000	20	89	8.6 RC
3/22	RED	7.00	4.93	4000	20	91	8.8 RC
3/23	RED	7.01	5.14	3000	18	92	8.8 RC
3/26	RED	7.00	4.94	5000	30	83	8.7 RC
3/28	RED	7.00	4.95	3300	18	87	7.3 RC
3/29	RED	7.01	5.04	3500	19	92	7.5 RC
4/1	RED	7.01	5.3	1500	4	89	6.9 RC
4/3	RED	7.00	5.4	1050	4	89	6.5 RC
4/6	RED	7.00	5.0	2500	18	82	6.2 RC
4/5	BLUE	7.00	6.5	300	-	73	6.5 RC
4/11	RED	7.00	5.5	2600	7	80	6.6 RC
4/12	RED	7.00	4.9	4800	23	81	6.6 RC
4/16	RED	6.99	5.4	2000	7	81	8.6 RC
4/17	RED	6.98	5.46	1800	6	83°F	8.9 C 25
4/18	YLO	7.00	7.44	700	-	81	7.44 RC
4/19	RED	7.00	5.73	1200	5	81	7.85 RC
4/26	RED	7.00	6.04	1200	2	80	6.65 RC
4/27	RED	7.00	4.93	4400	24	87.5	10.0 RC ADD 2000 mL ACETIC ACID, pH = 8.4
4/30	YLO	7.01	9.29	1600	*	80	6.35 RC * ADDED 1600 ACETIC ACID (AFTER BOILER)
4/30	RED	7.00	4.91	6000	30	85	9.6 RC ADDED 1600 ACID, pH = 8.6
5/1	YLO	7.00	7.54	1160	-	82	7.54 RC RELEASE WITH 4/30 RED, 7.1 2100

See instructions for proportioning chlorine dioxide

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DATE	TANK	BUFFER	pH IN	COND	NAPHT	TEMP	pH OUT	INITIAL	
5/2	RED	7.01	4.9	5000	20	83	6.95	RC	DISCHARGE w/ YLO
5/2	YLO	7.00	6.4	1600	-	89	6.4	RC	TOWER = 7.7
5/2	RED	7.00	4.86	5000	20	89	6.2	RC	
5/7	RED	7.00	4.84	5500	22	84	6.1	RC	DRAWS w/ YLO $\Delta \text{pH} = 3.400$
5/7	YLO	7.00	6.42	1500	-	85	6.42	RC	
5/8	RED	7.00	5.26	2700	7	85	7.40	RC	$\text{TDS} = 3650 \text{ mg/l}$, $\text{TSS} = 90 \text{ mg/l}$
5/8	YLO	7.00	7.03	1100	-	90	7.03	RC	
5/9	RED	7.01	4.81	5000	25	86	6.15	RC	DISCHARGE w/ YLO 3100, 6.45
5/10	RED	7.00	4.43	4400	23	87	9.25	RC	+ 1200 ACETIC ACID, pH = 6.75
5/13	RED	7.00	5.35	2500	7	83	6.92	RC	
5/14	RED	7.01	4.96	4900	22	88	9.23	RC	+ 900 ACID, pH = 7.45, w/ YLO, 3600
5/15	RED	7.01	4.94	4800	20	86	6.15	AC	
5/15	YLO	7.01	6.94	1400	-	85	6.94	RC	
5/16	RED	7.00	4.85	5500	23	86	6.05	RC	DRAWS w/ YLO, pH = 6.22
5/17	RED	7.00	5.11	3400	15	84	9.35	RC	+ 1000 ACID, pH = 7.2
5/18	R	7.01	5.7	2300	5	81	8.8	RC	
5/21	R	7.00	6.9	1300	-	86	6.9	RC	
5/22	YLO	7.01	6.7	1500	-	83	6.7	CE	
5/23	YLO	7.01	7.26	1100	-	88	7.26	CE	
5/25	RED	7.00	6.75	1300	-	89	6.75	RC	K240 LEAK
5/25	RED	6.99	8.30	1200	-	92	8.30	RC	"
5/26	RED	7.00	8.00	1050	-	87	8.00	RC	
5/29	RED	7.01	5.30	3000	10	90	6.25	RC	
5/31	YLO	7.00	9.2	1600	-	87	8.45	RC	ADD 400 ACID
6/1	RED	7.00	5.2	4500	16	89	5.5	RC	ADD 100, pH OUT = 6.2
6/4	YLO	7.01	9.8	1000	-	88	8.4	RC	ADDED 1000 ACETIC ACID
6/4	RED	7.01	11.5	8000	-	88	8.75	RC	LEAKED ADDED 5 CAL ACID! TUB WASHER
6/5	RED	7.00	11.1	8000	-	87	8.55	RC	ADDED 2.5 CAL ACID DISCHARGE w/ YLO
6/6	YLO	7.00	9.9	900	-	86	7.28	RC	ADDED 1400 ml ACID
6/7	RED	7.01	5.7	6000	26	90	6.3	RC	release w/ YLO
6/8	RED	7.00	5.7	4800	10	91	6.1	RC	release w/ RED
6/8	YLO	7.00	6.5	1500	-	88	6.5	RC	release w/ YLO

DO NOT HIGHLIGHT OR CIRCLE ANY WORDS

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DATE	TANK	BUFFER	pH IN	COND.	NaOH	TEMP	pH OUT	INITIAL	COMMENTS
6/11	RED	7.00	5.8	2000	-	90	6.15	RC	MIXED RED & YLO DURING DISCHARGE
6/11	YLO	7.00	6.7	1100	-	89	6.15	RC	TO GET 6.15 pH
6/12	RED	7.01	5.26	4800	18m	87	6.03	CG	
6/12	YLO	7.01	7.3	1000	-	91	7.3	RC	
6/13	RED	7.00	5.6	3560	10	90	6.1	RC	?
6/13	YLO	7.00	8.4	1000	-	90	8.5	RC	DISCHARGE TOGETHER pH=6.8
6/14	YLO	7.00	9.2	960	-	91	8.1	RC	ADDED 2100 ml Acetic Acid.
6/18	RED	7.01	6.2	2800	5	90	6.3	RC	
6/18	YLO	7.00	8.2	1000	-	91	8.2	RC	
6/19	RED	7.00	5.9	2200	6	91	6.4	RC	
6/20	YLO	7.00	9.4	1000	-	91	8.7	RC	ADDED 1000 Acetic Acid
6/21	RED	7.00	6.1	2300	6	92	8.3	RC	NEW pH PROBE
6/25		7.00	6.93			84.5		RC	SEMI ANNUAL TEST (GRAB)
6/26		7.00	7.45	1500				RC	AFTER 24 HRS. (COMPOSITE)
6/26	RED	7.00	9.0	2200	-	91	8.1	RC	ADDED 500 ml Acetic Acid
6/26	YLO	7.00	10.1	1500	-	90	7.0	RC	ADDED 1500 ml Acetic Acid
6/29	YLO	7.00	9.3	900	-	91	6.6	RC	ADDED 1000 ml Acetic Acid
6/29	RED	7.00	6.7	3200	-	91	6.7	RC	
7/15	RED	7.00	5.24	4800	24m	93	6.1	CG	Discharged with yellow P.H. 6.34
7/19	RED	7.01	6.94	1560	-	93.5	6.99	RC	
7/19	YLO	7.01	6.65	1200	-	93	6.65	RC	
7/21	RED	7.00	5.7	3160	18	91	6.24	RC	
7/26	RED	7.00	5.35	3600	20	93	6.25	CG	Discharged with yellow P.H 6.31
7/26	YLO	7.00	6.32	800	-	92	6.52	CG	
7/18	RED	7.00	5.37	4800	20	92	6.15	RC	DISCHARGED TOGETHER PH 6.28
7/18	YLO	7.00	6.81	1200	-	92	6.81	RC	CAUSTIC ALMOST EMPTY
7/20	RED	7.00	5.35	5600	40	93	6.2	RC	K TIMES NOT ACCURATE
7/23	RED	7.00	5.55	5500	20	96	6.11	RC	CAUSTIC FILLED - OK
7/24	YLO	7.01	6.73	600	-	93	6.78	RC	DRAIN w/ RED ↑
7/25	RED	7.00	5.95	3000	5	93	6.40	RC	
7/29	YLO	7.01	7.1	1600	-	93	7.1	RC	
7/26	RED	7.01	6.15	1260	-	95	6.95	RC	

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ATE	TANK	BUFFER	pH IN	COND.	NaOH	TEMP	pH OUT	INITIAL	COMMENTS
1/17	YLO	7.00	7.1	1100	-	91.5	7.1	RC	
1/30	YLO	7.00	7.25	600	-	93	7.25	RC	
1/30	RED	7.00	6.65	3200	-	92	6.65	RC	
1/31	RED	7.00	5.5	3000	15	93	6.1	RC	
1/31	YLO	7.00	6.5	700	-	95	6.5	RC	
1/1	RED	7.00	5.8	2900	15	95	6.7	RC	
1/2	RED	7.00	6.8	1600	-	95	6.8	RC	6 GAL. OIL OFF.
1/2	YLO	7.00	7.1	900	-	95	7.1	RC	
1/8	RED	7.00	5.2	4200	24	92	7.4	CG ⁱⁿ	Drained w/ YLO
1/8	YLO	7.00	7.01	1000	-	91	7.01	CG ⁱⁿ	
1/13	RED	7.00	5.50	3200	30	93	6.20	RC	6 GAL OIL OFF
1/13	YLO	7.00	6.60	500	-	93	6.6	RC	
1/14	RED	7.00	5.60	1200	10	95	6.5	RC	
1/16	RED	7.00	5.5	2100	25	91	6.6	RC	
1/20	YLO	7.00	6.9	1000	-	87	6.9	RC	
1/20	RED	7.00	5.4	5500	40	85	6.4	KE	
1/21	RED	7.00	5.15	6000	45	88	6.3	RC	DRAINED w/ YLO
1/22	RED	7.00	5.15	3500	42	91	8.6	RC	OVERSHOT, ADDED 1500 ACID
1/22	RED	7.00	5.00	5000	45	92	8.8	RC	OVERSHOT, ADDED 1.5 CAC ACID
1/24	RED	7.00	5.65	2000	30	93	8.2	RC	NOT FULL, 6 GAL OIL OFF
1/27	RED	7.00	5.00	6000	40	94	8.0	RC	DRAINED w/ YLO
1/28	RED	7.00	6.40	5200	-	89	6.4	RC	DRAINED w/ YLO
1/29	RED	7.00	5.80	3100	10	89	6.8	RC	
1/4	RED	7.01	5.6	2100	10	93	6.6	RC	
9/6	RED	7.02	5.1	6000	45	98	6.2	RC	DRAINED w/ YLO
9/7	RED	7.00	5.1	5500	55	87	6.3	RC	DRAINED w/ YLO
9/10	RED	7.00	5.5	3000	35	96	6.1	CG ⁱⁿ /RC	DRAINED w/ YLO
9/10	YLO	7.00	6.7	800	-	88	6.7	RC	
9/12	RED	7.01	6.9	2100	-	93	6.9	RC	
9/16	RED	7.00	5.1	3500	35	91	6.2	RC	
9/19	RED	7.00	5.1	5000	40	89	6.7	RC	DRAIN w/ YLO
9/20	RED	7.00	5.2	4600	40	86	6.5	RC	

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DATE	TANK	BUTYL PHM	PHTOZ	COND	NASH	TEMP	INITIAL	COMMENTS
1/26	RED	7.00	5.3	6.1	3500	27	81	RC
1/27	RED	7.01	5.35	6.9	3000	25	82	RC
1/28	RED	7.00	5.37	8.9	2600	20	87	RE OVERSHOT, ADD 3 GAL ACID
0/1	YLO	7.00	6.30	6.3	1500	-	86	RC
0/2	RED	7.00	5.1	6.2	4000	16	85	RC
0/4	RED	7.00	5.14	6.4	3500	28	88	RC
0/5	RED	7.00	5.39	8.85	4000	25	81	CC ^{II} RED Drained with yellow mixed
0/5	YLO	7.00	6.22	6.22	1400	-	80	CC ^{II}
0/8	RED	7.00	5.28	8.1	4000	20	85	RC MIXED, DRAINED w/YLO
0/10	RED	7.00	5.05	6.3	4000	35	84	RC MIXED, DRAINED w/YLO
0/11	YLO	7.00	6.92	6.92	950	-	87	RC
0/11	RED	7.00	5.36	7.70	3000	15	85	RC
0/12	RED	7.01	5.75	8.7	2000	7	87	AC
0/15	YLO	7.01	7.23	7.23	1200	-	78	CC ^{II}
0/15	RED	7.01	6.07	6.07	2000	-	75	CC ^{II} RED Drained with yellow
0/16	RED	7.00	5.15	7.18	3500	22	83	RC
0/17	RED	7.00	5.55	8.05	3000	8	88	RC
0/17	YLO	7.00	7.80	7.80	900	-	111	KC BOILER LEAK
0/19	RED	7.00	5.27	8.9	2600	18	95	RC OVERSHOT, ADD 1/2 GAL ACID.
0/18	RED	7.00	5.45	6.2	2000	6	90	RC
0/19	RED	7.00	5.93	6.5	1500	2	88	RC
0/22	RED	6.99	5.1	7.4	3000	32	83	RC overshot, add 1/2 GAL ACID.
0/24	RED	6.98	5.27	7.48	4700	22	87	CC ^{II} RED Drained with YLO
0/24	YLO	6.98	6.68	6.68	1500	-	88	CC ^{II}
0/25	RED	7.00	5.46	6.5	3500	10	86	RC
0/28	RED	7.00	5.35	6.1	4000	12	82	RC
0/29	RED	7.00	5.24		3800	86	RC	
0/30	RED	6.98	6.1		3800	13	81	CC ^{II} RED Drained with YLO
0/31	RED	7.00	5.35	7.6	3500	14	84	RC
1/1	RED	7.00	5.17	8.8	3500	18	88	RC
1/12	RED	7.01	5.29	8.7	3500	13	86	RC
1/13	RED	7.00	5.86	6.5	2560	2	83	RC

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ATE	TANK	Buffer	pH	IMPHour	Cond.	NaOH	Temp	Initial	Comments
1/6	RED	7.01	5.19	7.74	4000	20	84.0	CF	
1/6	y10	7.01	6.95	6.95	1500	-	81.6	CF	
1/7	RED	7.01	5.97	6.3	2800	2	84	RC	
1/9	RED	7.01	5.24	6.4	4200	18	86	RC	
1/12	RED	7.00	5.14	6.2	4800	20	83	RC	DISCHARGE w/ 860
1/14	RED	7.00	5.08	6.6	4000	20	82	RC	
1/15	RED	7.00	5.2	6.15	4000	20	85	RC	
1/21	RED	7.00	5.10	6.08	3000	20	84	RC	
1/26	RED	7.00	5.4	6.4	2500	8	78	RC	
1/26	y10	7.00	6.8	6.8	800	-	74	RC	
1/27	RED	7.00	5.5	7.9	2000	8	74	RC	
1/28	R+Y	7.00	-	6.65	1800	-	78	RC	GRAB SAMPLE FOR SEMIANNUAL TEST
2/3	RED	7.00	6.83	6.85	2000	-	79	CF	
2/3	y10	7.00	6.90	6.85	800	-	79	CF	
2/4	RED	7.00	5.17	8.25	3500	20m	82	CF	Drained with yellow
2/4	y10	7.00	6.85	6.85	900	-	82	CF	
2/5	RED	6.99	5.73	6.38	4000	10m	83	CF	
2/5	y10	6.99	6.10	6.10	1500	-	84	CF	
2/6	RED	6.99	5.01	6.67	4500	28m	88	CF	
2/6	RED	6.99	5.12	6.10	5000	20m	86	CF	
2/11	y10	7.01	6.61	6.61	1000	-	79	CF	
2/12	RED	7.01	5.04	6.28	4500	20m	80	EB	
2/13	RED	7.00	5.08	8.89	4000	16m	83	CF	Drained with yellow
2/13	y10	7.00	6.10	6.20	1800	-	84	CF	
2/17	RED	7.00	5.45	8.70	4000	12m	81	CF	Drained with yellow
2/17	y10	7.00	6.93	6.93	900	-	81	CF	
2/18	RED	7.02	4.99	7.49	5000	50m	81a	CF	Drained with yellow
2/18	y10	7.00	7.57	7.57	900	-	86	CF	
2/19	RED	7.02	5.21	8.87	4800	20m	82	EA	Drained with yellow
2/19	y10	7.02	6.42	6.42	800	-	88	EB	
2/21	y10	7.02	6.53	6.55	600	-	82	EB	
2/26	RED	7.02	5.63	8.66	3000	8m	77	EB	Drained with yellow
2/26	y10	7.01	8.63	8.63	900	-	77	EA	

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L/T	TANK	BUFFER	PH IN	PH OUT	Conc	Noft	Type	
1/27	Y/10	7.01	8.77	8.77	1000	-	79	EB
1/27	RED	7.00	6.13	6.13	3200	-	82	EB
1/28	Y/10	7.01	8.89	7.66	1000	-	79	EB
1/28	RED	6.99	6.10	6.67	1900	1m	79	EB
3/13	RED	7.00	5.05	6.10	4000	18m	76	CCF
1/2	Y/10	7.05	8.01	8.01	1000	-	75.8	CCF
1/4	RED	7.01	5.89	8.75	2800	8m	76.0	CCF
1/8	RED	7.00	5.10	6.70	3300	18m	81.5	CCF
1/8	Y/10	7.00	6.50	6.50	900	-	82.	CCF
1/9	RED	7.00	5.04	8.79	3500	20m	84.	CCF
1/9	Y/10	7.00	6.10	6.10	900	-	85	CCF
1/14	RED	7.00	5.17	6.22	4500	18m	79.	CCF
1/14	Y/10	7.00	8.70	8.70	700	-	80	CCF
1/16	RED	7.02	5.20	8.42	4200	13m	79	EB
1/18	RED	7.01	5.16	7.04	3400	13m	84	EB
1/18	Y/10	7.00	6.10	6.10	600	-	85	CCF
1/21	RED	7.00	5.35	8.55	2800	9m	74	CCF
1/21	Y/10	7.00	6.13	6.13	1000	-	74.	CCF
1/22	Y/10	7.00	7.06	7.06	700	-	75.	CCF
1/22	RED	7.00	5.11	8.00	4500	20m	75.	CCF
1/23	RED	7.00	5.35	7.67	4500	6m	76.	CCF
1/23	Y/10	7.00	10.00	8.46	1400	-	76.	CCF
1/25	RED	7.00	5.22	6.23	4000	-	79.	CCF
1/25	Y/10	7.00	6.20	6.20	900	-	79.	CCF
1/26	RED	7.01	5.44	6.20	2700	5m	74.6	CCF
1/26	Y/10	7.00	6.33	6.33	800	-	75.0	CCF
1/27	RED	7.01	5.72	6.45	2000	3m	75.0	CCF
1/27	Y/10	7.00	6.48	6.48	700	-	74.0	CCF
1/28	RED	7.01	5.13	6.93	3200	13m	86	EB
1/30	Y/10	7.01	6.17	6.17	1000	-	85	EB
1/31	RED	7.00	5.10	6.11	4200	23m	81	EB

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DATE	TANK	BOTTLE	P.H. IN	P.H. OUT	COND	NIT	TEMP	INT	Comments
3/6	RED	7.00	5.78	8.80	3800	10-m	77.0	C6F	
3/6	y/0	7.00	6.20	6.20	600	-	77.0	C6F	Drained with RED
3/7	RED	7.00	5.91	6.52	2000	2-m	79.0	C6F	
3/7	y/0	7.00	6.21	6.21	600	-	79.0	C6F	Drained with RED
3/11	RED	7.00	5.01	6.18	3400	7-m	78.0	C6F	
3/11	y/0	7.00	6.90	6.90	700	-	78.0	C6F	Drained with RED
3/12	RED	7.00	5.04	6.28	3800	24-m	78.0	C6F	
3/12	y/0	7.00	8.36	8.36	700	-	78.0	C6F	Drained with RED
3/13	RED	7.01	5.17	8.38	4000	20-m	80.0	C6F	
3/13	y/0	7.00	6.10	6.10	1000	-	80.0	C6F	Drained with RED
3/14	RED	7.00	5.25	8.10	2900	11-m	81.0	C6F	
3/14	y/0	7.00	8.47	8.47	900	-	81.0	C6F	Drained with RED
3/15	RED	7.01	4.98	6.37	4000	32-m	80.1	C6F	
3/15	y/0	7.01	6.10	6.10	700	-	80.1	C6F	Drained with RED
3/18	RED	7.04	6.20	7.40	4500	5-m	76	EB	
3/19	RED	7.02	5.07	6.38	4900	27-m	78	EB	
3/20	RED	7.00	5.97	7.64	400		77	EB	ADDED 500 mL NH ₄ H
3/21	RED	7.02	5.75	8.18	4000	8-m	77	EB	Drained with y/0
3/21	y/0	7.02	5.97	7.47	500		77	EB	ADDED 500 mL NH ₄ H
3/22	y/0	7.00	6.22	6.22	600	-	77.0	C6F	
3/25	y/0	7.00	6.30	6.30	400	-	77.0	C6F	
3/27	RED	7.00	5.93	6.55	1700	2-m	81.0	C6F	
3/27	y/0	7.00	8.65	8.65	700	-	80.0	C6F	Drained with RED
3/1	RED	7.00	5.15	7.65	2200	13-m	81.3	C6F	
3/1	y/0	7.00	6.23	6.23	700		78.0	C6F	Drained with RED
3/4	RED	7.00	5.09	6.38	3800	29-m	76.0	C6F	
3/4	y/0	7.00	6.11	6.11	400	-	75.0	C6F	
3/5	y/0	7.00	6.27	6.27	400	-	75.2	C6F	
3/6	RED	7.01	5.40	6.21	2200	10-m	77.5	C6F	
3/7	y/0	7.00	6.10	6.10	300	-	80.2	C6F	
3/7	RED	7.00	5.20	6.20	2200	11-m	87.1	C6F	
3/11	y/0	7.00	8.10	8.10	2400	-	84.0	C6F	
3/12	RED	7.00	5.56	8.24	3600	8-m	80.4	C6F	
3/12	y/0	7.00	6.14	6.14	400	-	79.4	C6F	

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DATE	TANK	Buffer	pH IN	pH OUT	Cond	NA°H	Temp	INTL	Comments
3/13	y/0	7.01	6.10	6.10	400	—	79.2	CCF	
3/15	RED	7.01	4.85	6.60	4400	49-m	82.0	CCF	
3/15	y/0	6.99	6.44	6.44	1000	—	79.0	CCF	
3/18	RED	7.00	5.05	6.14	4800	28-m	86.0	CCF	
3/18	y/0	7.00	7.54	7.54	1400	—	77.5	CCF	
3/19	RED	7.01	5.14	8.41	4200	25-m	78.4	CCF	
3/19	y/0	7.01	8.82	8.82	1400	—	76.9	CCF	
3/22	RED	7.00	5.25	6.31	4000	9-m	78.0	CCF	
3/23	REC	7.00	5.30	6.10	4500	20-m	78.5	CCF	
3/26	y/0	7.02	8.83	8.83	1500	—	78.2	EB	
3/26	RED	7.01	5.16	6.38	4300	30-m	79	EB	
3/27	y/0	7.01	7.10	7.10	1300	—	80.9	CCF	
3/27	RED	7.01	5.33	7.01	3500	13-m	79.3	CCF	Dominates with y/0
3/28	y/0	7.01	6.51	6.51	1200	—	80.1	CCF	
3/28	REC	7.01	5.19	6.30	3300	18-m	79.5	CCF	Dominates with y/0
3/29	y/0	7.00	6.50	6.30	1000	—	81.8	CCF	
3/29	RED	7.00	5.45	8.85	2500	12-m	79.7	CCF	Dominates with y/0
4/1	y/0	7.00	6.61	6.61	800	—	83.8	EB	
4/1	RED	7.02	6.64	6.64	2200	—	84	EB	
4/2	y/0	7.02	6.71	6.71	600	—	85.1	EB	
4/2	RED	7.00	5.15	7.23	3600	20-m	85.9	EB	
4/3	y/0	7.01	6.87	6.87	600	—	81	EB	
4/3	RED	7.01	6.71	6.71	2800	—	89	EB	
4/4	y/0	7.01	6.54	6.54	600	—	86.9	EB	
4/4	RED	7.01	4.74	6.57	4200	23-m	92.5	EB	
4/8	y/0	7.01	6.60	6.60	500	—	82.3	CCF	
4/9	y/0	7.01	6.66	6.66	400	—	83.4	CCF	
4/11	RED	7.00	5.79	8.81	3000	8-m	83.5	EB	Dominates with y/0
4/11	y/0	7.00	6.20	6.20	600	—	83.6	EB	
4/12	RED	7.00	5.19	8.16	4200	20-m	84.0	CCF	Dominates with y/0
4/12	y/0	7.00	6.15	6.15	400	—	87.0	CCF	
4/15	RED	6.99	5.23	8.84	4400	23-m	87.7	CCF	Dominates with y/0
4/15	y/0	6.99	7.26	7.26	400	—	86.8	CCF	

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DATE	TANK	Buffer	pH IN	pH OUT	Cond	Na ⁺ H	Temp	Intl	Comments
4/16	RED	7.01	5.30	6.35	4200	13-m	85.1	CGF	Drained with y/o
4/16	y/o	7.01	6.82	6.82	400	—	84.2	CGF	
4/17	RED	7.00	4.96	6.40	4200	25-m	85.5	CGF	
4/17	y/o	7.00	6.40	6.40	400	—	83.5	CGF	
4/22	RED	7.00	5.20	6.05	3400	19-m	80.4	CGF	
4/22	y/o	7.00	6.31	6.31	300	—	81.5	CGF	
4/23	RED	6.98	5.00	6.23	3400	27-m	82.6	EB	
4/23	y/o	6.99	6.34	6.34	500	—	81.9	EB	
4/24	RED	6.99	5.30	8.70	2600	13-m	80.0	CGF	Drained with y/o
4/24	y/o	6.99	6.50	6.50	600	—	83.1	CGF	
4/25	RED	7.00	5.86	7.44	1800	3-m	82.9	CGF	Drained with y/o
4/25	y/o	7.00	6.60	6.60	500	—	83.0	CGF	
4/29	y/o	7.00	6.20	6.20	400	—	85.0	CGF	
4/30	RED	7.00	5.07	6.45	3800	25-m	86.6	CGF	Drained with y/o
4/30	y/o	7.00	6.44	6.44	400	—	88.2	CGF	
5/2	RED	7.00	5.07	7.18	3800	22-m	89.7	CGF	
5/2	y/o	7.00	6.17	6.17	1200	—	88.6	CGF	
5/3	RED	7.00	5.10	6.05	3800	22-m	85.0	CGF	
5/3	y/o	7.00	6.10	6.10	1000	—	87.1	CGF	
5/6	RED	7.01	6.00	6.00	2600	—	83.6	CGF	
5/6	y/o	7.01	6.05	6.05	900	—	87.2	CGF	Drained with RED
5/7	RED	7.00	5.95	6.17	1400	1-m	92.5	CGF	
5/7	y/o	7.00	6.08	6.08	700	—	84.3	CGF	Drained with RED
5/9	y/o	7.01	6.21	6.21	400	—	87.4	CGF	
5/13	y/o	7.02	5.30	8.65	800	—	83.0	EB	BANDED 500ml 11A
5/13	RED	6.99	5.87	3.75	4200	30-m	83.2	EB	
5/14	RED	7.01	5.46	8.14	4500	13-m	86.6	EB	
5/14	y/o	6.99	6.40	6.90	900	—	86.2	EB	Drained with RED
5/15	RED	7.01	6.20	6.20	2000	—	86.3	EB	
5/15	y/o	7.00	6.60	6.60	700	—	86.2	EB	
5/16	RED	7.00	4.89	6.05	3800	28-m	93.0	CGF	Drained with y/o
5/16	y/o	7.00	6.55	6.55	700	—	88.0	CGF	

SCIENTIFIC FEDERY PRODUCTION'S CHICAGO 6-885

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DATE	TANK	Buffer	P.H. IN	P.H. OUT	Cond	Na ⁺	Temp	Int'l	Comments
5/20	y10	7.00	6.15	6.15	4000	—	90.3	CC	
5/20	RED	7.00	4.90	6.15	4800	28-m	89.2	CC	Drained with y10
5/22	YEL	6.99	5.95	8.30	800	—	87.2	EB	Added 300ml NaOH
5/22	RED	6.99	4.78	6.11	4700	26-m	91.2	EB	Drained with y10
5/23	y10	6.99	6.57	6.57	400	—	85.7	CC	
5/23	RED	6.99	5.90	6.07	2800	3-m	91.0	CC	Drained with y10
5/24	y10	7.00	6.36	6.36	600	—	83.3	CC	
5/24	RED	7.00	6.20	6.20	2300	—	90.0	CC	Drained with y10
5/28	y10	7.00	6.60	6.60	400	—	84.1	CC	
5/27	RED	7.00	5.56	6.57	2000	5-m	94.8	CC	
5/30	y10	7.00	6.58	6.58	400	—	92.3	CC	
5/30	RED	7.00	4.78	6.50	4000	30-m	92.6	CC	Drained with y10
5/31	y10	6.99	6.72	6.72	200	—	80.2	EB	
5/31	RED	7.02	5.33	8.77	2500	10-m	89.9	EB	
5/31	y10	7.00	6.31	6.31	300	—	99.3	EB	
5/14	RED	7.00	5.58	8.73	1300	6-m	86.4	EB	
5/15	y10	7.00	6.42	6.42	200	—	90.1	EB	
5/15	RED	7.01	4.95	7.45	3500	24-m	87.3	EB	
5/16	y10	7.01	6.01	8.47	1000	—	87.7	EB	300 ml 14°H
5/16	RED	7.00	5.10	6.46	4200	33-m	85.4	EB	Drained with y10
6/10	y10	7.00	6.15	6.15	200	—	90.3	CC	
6/10	RED	7.00	5.40	8.82	3800	8-m	87.7	CC	Drained with y10
6/11	y10	7.01	6.30	6.30	200	—	89.8	CC	
6/12	RED	7.00	5.17	7.10	3000	16-m	87.4	CC	Drained with y10
6/12	y10	7.00	6.02	6.02	600	—	89.9	CC	
6/15	RED	7.00	5.42	6.47	3400	12-m	89.4	CC	
6/15	y10	7.00	6.10	6.10	400	—	87.6	CC	
6/17	RED	7.00	6.30	6.30	1000	—	85.3	CC	Semi-Grab sample of Annuel
6/18	RED	7.00	4.82	6.82	4000	30-m	85.2	CC	Drained with y10
6/18	y10	7.00	6.50	6.50	400	—	84.9	CC	
6/19	RED	7.01	5.16	8.44	3000	13-m	86.2	EB	
6/19	y10	7.00	6.85	6.85	600	—	86.6	EB	

SCIENTIFIC INDUSTRIAL FERTILIZER CO. INC.

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DATE	TANK	BUFFER	P.H. IN	P.H. OUT	COND.	NA°H	TEMP	INTL	Comments
6/20	y/0	7.00	6.42	6.42	600	—	87.7	CC ²	
6/20	RED	7.00	4.87	6.92	4800	36-m	87.5	CC ²	Drained with y/0
6/21	RED	7.00	5.03	8.80	4800	31-m	92.9	CC ²	
6/21	XRD	7.00	6.40	6.40	600	—	89.4	CC ²	Drained with RED
6/24	RED	7.00	6.57	6.57	3800	—	96.8	CC ²	
6/24	y/0	7.00	8.95	8.95	500	—	93.6	CC ²	Drained with RED
6/25	y/0	7.00	8.96	8.96	500	—	91.2	CC ²	
6/27	y/0	7.00	8.10	8.10	600	—	93.1	CC ²	Drained with RED
6/27	RED	7.00	4.97	8.48	3800	24-m	93.1	CC ²	
6/28	RED	7.01	5.15	8.22	3800	15-m	89.9	CC ²	
7/1	y/0	7.00	8.88	8.88	500	—	88.8	CC ²	Drained with RED
7/1	RED	7.00	5.95	6.10	3200	1-m	88.9	CC ²	
7/2	y/0	7.00	8.58	8.58	500	—	88.9	CC ²	Drained with RED
7/2	RED	7.00	4.80	6.45	4500	30-m	91.9	CC ²	
7/3	y/0	7.00	7.31	7.31	500	—	90.5	CC ²	Drained with RED
7/3	RED	7.00	5.30	6.74	3000	10-m	94.9	CC ²	
7/5	y/0	7.01	8.00	8.00	400	—	89.0	CC ²	
7/9	y/0	7.00	6.51	6.51	400	—	89.8	EB	
7/10	RED	7.00	5.25	8.86	4800	25-m	86.4	CC ²	
7/10	y/0	7.00	6.30	6.30	400	—	87.0	CC ²	
7/11	RED	6.99	4.95	7.10	4800	25-m	92.3	CC ²	
7/11	y/0	6.99	6.39	6.39	400	—	91.6	CC ²	
7/12	RED	6.99	5.33	7.35	4400	15-m	94.0	CC ²	
7/12	y/0	6.99	6.42	6.42	300	—	92.7	CC ²	Drained with RED
7/15	RED	7.00	5.00	6.09	4800	28-m	89.1	CC ²	
7/16	RED	7.00	5.50	6.27	2200	5-m	88.5	CC ²	
7/16	y/0	7.00	6.38	6.38	300	—	98.7	CC ²	Drained with y/0
7/18	RED	6.99	4.76	7.40	4000	28-m	94.9	CC ²	
7/18	y/0	6.99	6.14	6.14	300	—	96.5	CC ²	Drained with RED
7/19	RED	7.00	5.24	6.98	2300	6-m	93.4	CC ²	
7/19	y/0	7.00	6.34	6.34	300	—	94.4	CC ²	
7/23	y/0	7.00	6.83	6.83	300	—	89.7	CC ²	
7/24	RED	7.00	5.05	6.20	3400	12-m	88.1	CC ²	Drained with y/0
7/24	y/0	7.00	8.89	8.89	300	—	92.3	CC ²	continued to Page

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DATE	TANK	Buffer	pH IN	pH OUT	Cond.	NA°H	Temp	Intl	Comments
7/26	RED	7.0	5.14	6.02	3800	13-m	88.3	CC	
7/26	y/o	7.0	6.64	6.64	500	—	90.4	CC	Drained with RED
7/29	RED	6.99	5.07	8.90	4800	25-m	88.1	CC	
7/29	y/o	6.99	6.91	6.91	900	—	90.6	CC	
7/30	RED	7.0	5.25	7.48	4500	13-m	87.0	CC	
7/30	y/o	7.0	6.90	6.90	800	—	90.2	CC	Drained with RED
7/31	RED	7.0	5.93	8.82	3200	3-m	86.5	EB	
7/31	YEL	7.0	7.29	7.29	1000	—	87.2	EB	
8/1	RED	7.0	5.20	7.86	3800	13-m	89.0	CC	
8/1	y/o	7.0	6.40	6.40	900	—	90.6	CC	Drained with RED
8/2	RED	7.0	5.42	6.14	3600	4-m	94.0	CC	
8/2	y/o	7.0	6.92	6.92	900	—	91.6	CC	Drained with RED
8/6	RED	7.0	5.10	6.10	4800	20-m	88.5	CC	
8/6	y/o	7.0	6.75	6.75	800	—	93.1	CC	Drained with RED
8/7	RED	7.0	5.47	6.12	2800	3-m	92.3	CC	
8/7	y/o	7.0	6.68	6.68	800	—	92.0	CC	Drained with RED
8/9	RED	7.0	6.21	6.21	2000	—	88.5	EB	
8/12	y/o	7.0	6.47	6.47	600	—	91.8	CC	
8/12	RED	7.0	4.95	6.75	4500	25-m	94.5	CC	
8/13	y/o	6.99	6.53	6.53	600	—	89.9	CC	
8/14	RED	7.0	5.33	6.05	2400	5-m	91.7	CC	
8/14	y/o	7.0	6.60	6.60	500	—	92.4	CC	Drained with RED
8/15	RED	7.0	4.85	6.05	4800	25-m	90.0	CC	
8/15	y/o	7.0	6.05	6.05	600	—	92.0	CC	Drained with RED
8/19	RED	7.0	5.30	6.29	3800	5-m	91.1	CC	
8/19	y/o	7.0	6.02	6.02	400	—	90.2	CC	Drained with RED
8/20	RED	7.0	4.92	6.16	4800	35-m	88.6	CC	
8/20	y/o	7.0	6.00	6.00	700	—	90.0	CC	Drained with RED
8/21	RED	7.0	5.30	6.29	4800	15-m	91.1	CC	
8/21	y/o	7.0	6.03	6.03	800	—	91.5	CC	
8/22	RED	7.0	5.13	6.35	4600	18-m	92.3	CC	
8/22	y/o	7.0	6.07	6.07	500	—	91.9	CC	Drained with RED

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Date	Tank	Buffer	pH IN	pH OUT	Card	NaOH	Temp	Int'l	Comments
3/26	RED	7.0	0.558	7.26	4400	12-m	91.7	CO ₂	
3/26	y/0	7.0	0.608	6.08	400	—	91.3	CO ₂	Drained with RED
3/27	RED	7.0	0.511	8.78	4500	18-m	95.8	CO ₂	
3/29	y/0	7.0	1.605	6.05	700	—	93.9	CO ₂	
3/29	RED	7.0	1.502	6.14	4800	28-m	93.4	CO ₂	
7/3	RED	7.0	1.516	7.35	4600	27-m	87.8	EB	
7/2	y/0	7.0	1.648	6.48	500	—	89.5	EB	
7/4	RED	7.0	1.533	8.82	2800	15m	89.8	EB	
7/4	y/0	7.0	1.618	6.18	600	—	90.0	EB	
7/5	RED	7.0	0.535	6.23	3200	14m	88.3	EB	
7/5	y/0	7.0	2.639	6.39	800	—	86.3	EP	
7/6	RED	7.0	1.535	6.35	3500	13m	91.6	EB	
7/9	y/0	7.0	1.650	6.50	600	—	90.8	CO ₂	Drained with RED
7/9	RED	7.0	1.578	6.20	2200	3-m	90.5	CO ₂	
9/11	y/0	7.0	0.660	6.60	600	—	92.2	CO ₂	
9/11	RED	7.0	0.517	6.14	3400	17-m	98.7	CO ₂	
9/12	y/0	7.0	1.620	6.20	500	—	92.0	CO ₂	Drained with RED
9/12	RED	7.0	1.530	6.58	3800	12-m	95.5	CO ₂	
9/16	y/0	7.0	0.604	6.04	300	—	85.0	CO ₂	
9/16	RED	7.0	0.610	6.10	3200	—	87.6	CO ₂	
9/17	y/0	7.0	1.605	6.05	400	—	84.3	CO ₂	
9/18	RED	7.0	0.525	6.20	4800	25-m	84.5	CO ₂	
9/18	y/0	7.0	0.615	6.15	600	—	86.4	CO ₂	Drained with RED
9/19	y/0	7.0	0.686	6.86	600	—	89.3	CO ₂	
9/23	RED	7.0	0.519	6.10	4900	27-m	82.4	CO ₂	
9/23	y/0	7.0	0.520	6.12	1300	—	84.3	CO ₂	400 mL of 25% sodium Hydro
9/24	RED	7.0	0.521	7.50	4900	28-m	84.5	CO ₂	
9/26	y/0	7.0	0.550	6.47	1000	—	87.8	CO ₂	300 mL of 25% sodium Hydro
9/26	RED	7.0	0.520	8.90	4800	20-m	89.4	CO ₂	Drained with y/0
7/30	y/0	7.0	0.558	6.18	1100	—	86.4	CO ₂	250 mL of 25% sodium Hydro
7/30	RED	7.0	0.538	7.20	4400	12-m	87.8	CO ₂	
7/1	y/0	7.0	0.605	6.05	1100	—	88.7	CO ₂	
10/1	RED	7.0	0.521	6.30	4900	18-m	89.2	CO ₂	

FOURTH EDITION PRODUCTION CHICAGO 6-305

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BOOK TWO

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DATE	TANK	Buffer	pH In	pH Out	Cond	NaOH	Temp	Int'l	Comments
10/2	y/10	6.99	6.15	6.15	1000	—	85.4	CCF	
10/2	RED	6.99	5.57	6.40	3800	5-m	90.8	CCF	
10/3	y/10	7.00	5.67	6.51	1000	—	90.0	CCF	
10/3	RED	7.00	4.99	6.39	4500	23-m	90.0	CCF	300 mL of ^{25%} Sodium Hyd
10/7	y/10	7.00	6.00	6.00	500	—	88.3	CCF	
10/7	RED	3.0	5.54	6.32	4000	7-m	87.8	CCF	
10/8	y/10	7.00	6.10	6.10	900	—	88.9	CCF	
10/8	RED	7.00	5.15	6.50	3500	11-m	87.2	CCF	Drained with y/10
10/9	y/10	7.00	5.30	6.08	1200	—	88.3	CCF	400 mL of ^{25%} Sodium Hyd
10/9	RED	7.00	5.00	6.21	4400	23-m	85.6	CCF	Drained with y/10
10/10	y/10	7.00	5.93	7.15	1200	—	85.7	CCF	50 mL of ^{25%} Sodium Hyd
10/10	RED	7.00	5.04	8.46	4000	22-m	91.5	CCF	
10/14	y/10	7.00	6.10	6.10	1000	—	85.6	CCF	
10/14	RED	7.00	5.13	6.18	4200	15-m	87.7	CCF	Drained with y/10
10/15	y/10	7.00	6.11	6.11	1000	—	86.2	CCF	
10/15	RED	7.00	5.13	6.12	4800	21-m	87.0	CCF	
10/16	RED	7.00	5.15	6.36	3800	16-m	85.4	CCF	
10/17	RED	7.01	5.14	6.54	3600	14-m	93.0	CCF	
10/18	y/10	7.01	6.10	6.10	400	—	87.0	CCF	
10/19	RED	7.01	4.90	6.44	4400	43-m	83.0	CCF	
10/21	y/10	7.01	6.04	6.04	500	—	86.3	CCF	
10/23	RED	6.99	5.22	7.88	3000	12-m	82.8	CCF	
10/23	y/10	6.99	6.10	6.10	700	—	86.4	CCF	Drained with RED
10/24	RED	7.00	5.18	6.02	3400	14-m	83.0	CCF	
10/24	y/10	7.00	5.24	6.07	1000	—	87.3	CCF	400 mL ^{25%} Sodium Hyd
10/25	RED	6.99	4.99	6.08	4800	36-m	83.8	CCF	
10/25	y/10	6.99	5.49	6.55	900	—	86.2	CCF	350 mL sodium Hyd
10/28	RED	7.01	5.40	8.76	3400	13-m	87.2	EB	
10/28	y/10	7.01	5.72	6.40	700	—	84.0	EB	250 mL ^{25%} Sodium Hyd
10/30	RED	7.00	4.98	6.62	4600	33-m	85.4	CCF	
10/30	y/10	7.00	6.85	6.85	500	—	84.0	CCF	Drained with RED
10/31	RED	6.99	5.21	6.77	4000	33-m	86.9	CCF	
11/1	RED	6.99	5.23	8.28	3000	12-m	84.5	CCF	

SCIENTIFIC INSTRUMENTS OF CALIFORNIA INC.

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Cleanned oil water separator and emptied tank cones 11/2/13

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TITLE

Standard Methods 4500 H+B

BOOK NO.

2013

Week No

WEEK	TANK	BUFFER	pH IN	Pd OUT	COND	NAOH	TEMP	INTL	COMMENTS
11/4	y/o	7.00	5.95	6.05	600	—	81.7	ccf	50 mL 25% Sodium Hyd
11/4	RED	7.00	5.90	6.57	1400	3-m	81.3	ccf	
11/5	y/o	7.00	6.24	6.24	1100	—	82.3	ccf	
11/5	RED	7.00	4.82	6.05	3000	18-m	83.6	ccf	
11/6	y/o	7.00	6.55	6.55	900	—	83.7	ccf	Drained with RED
11/6	RED	7.00	5.60	6.88	4200	6-m	83.9	ccf	
11/7	RED	7.00	5.55	6.76	3400	5-m	87.2	ccf	
11/8	y/o	7.00	6.33	6.33	700	—	85.0	ccf	
11/8	RED	7.00	5.68	6.20	2200	2-m	91.0	ccf	Drained with y/o
11/11	RED	6.99	5.04	6.32	3500	16-m	82.0	ccf	
11/11	y/o	6.99	6.10	6.10	500	—	84.0	ccf	Drained with RED
11/12	RED	7.00	5.95	6.40	3900	2-m	83.9	ccf	
11/12	y/o	7.00	6.12	6.12	400	—	82.7	ccf	Drained with RED
11/13	RED	7.00	4.95	8.50	2800	22-m	88.9	ccf	
11/14	y/o	7.00	6.15	6.15	600	—	82.5	ccf	
11/15	y/o	7.00	6.10	6.10	700	—	81.5	ccf	
11/18	y/o	7.00	6.05	6.05	500	—	80.7	ccf	
11/18	RED	7.00	5.06	6.04	4000	21-m	83.5	ccf	Drained with y/o
11/19	RED	7.00	5.00	6.24	4500	25-m	86.2	ccf	
11/20	y/o	7.00	5.73	8.55	1000	—	87.5	ccf	250 mL of 25% Sodium Hyd
11/21	y/o	7.00	5.58	6.53	700	—	81.6	ccf	300 mL of 25% Sodium Hyd
11/21	RED	7.00	4.96	6.27	4800	31-m	87.0	ccf	
11/22	y/o	7.00	6.15	6.15	600	—	86.5	ccf	
11/26	y/o	7.00	6.65	6.65	600	—	81.2	ccf	
2/2	RED	7.00	5.39	8.13	3400	14-m	76.4	ccf	
2/2	y/o	7.00	5.48	6.50	900	—	76.7	ccf	350 mL 25% Sodium Hyd
2/3	RED	7.00	5.42	8.40	2700	10-m	78.0	ccf	
2/3	y/o	7.00	5.64	6.88	900	—	80.8	ccf	300 mL 25% Sodium Hyd
2/4	y/o	6.99	6.07	6.07	700	—	83.7	ccf	
2/5	RED	7.00	5.18	6.43	3500	18-m	81.5	ccf	
2/5	y/o	7.00	5.76	6.48	700	—	83.3	ccf	250 mL 25% Sodium Hyd
2/6	y/o	7.01	5.54	6.24	1000	—	78.4	ccf	300 mL 25% Sodium Hyd

Grab Sample 9 semi

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Analytical Test

Standard Methods 4500 H+B

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Work continued from Page

DATE	TANK	R. (CFS)	pH IN	pH OUT	COND	NA°D	TEMP	INTL	Comments
12/10	y/10	6.99	6.46	6.46	1000	—	78.3	CC	
12/13	RED	7.01	5.17	6.45	4500	27-m	74.5	CC	Drained with y/10
12/13	y/10	7.01	5.77	6.32	1500	—	79.3	CC	300 ml 25% Sod Hyc
12/16	RED	7.00	5.37	6.13	4800	23-m	74.1	CC	Drained with y/10
12/16	y/10	7.00	5.62	6.06	1800	—	76.8	CC	350 ml 25% Sod Hyc
12/17	RED	7.01	5.37	6.01	4800	26-m	74.1	CC	
12/17	y/10	7.01	6.65	6.65	1700	—	93.0	CC	Drained with RED
12/18	RED	7.00	5.25	6.02	4800	27-m	80.4	CC	
12/18	y/10	7.00	6.18	6.18	1200	—	84.2	CC	Drained with RED
12/20	RED	7.01	5.23	815	4000	25-m	86	EB	Drained with y/10
12/20	y/10	7.01	6.65	6.65	1100	—	80.3	EB	
12/23	RED	7.00	5.02	8.20	3500	35-m	78.0	EB	
12/26	y/10	7.01	6.81	6.81	1000	—	73.4	EB	
1/1/26	RED	7.01	5.02	6.54	3800	25-m	74.0	EB	
1/2/31	RED	7.00	5.02	6.70	3600	23-m	77	EB	
1/3/31	YELL	7.00	6.93	6.91	800	—	75.3	EB	
1/2/31	YELL	7.00	6.55	6.55	800	—	76.2	EB	
1/2/31	RED	7.00	5.32	6.10	3200	10-m	75	EB	
1/3/31	RED	7.00	5.48	6.92	3200	10-m	75.0	CC	
1/6/31	y/10	7.00	6.45	6.45	800	—	78.0	CC	
1/6/31	y/10	7.00	6.22	6.22	500	—	74.8	CC	
1/6/31	RED	7.00	5.34	6.36	3700	14-m	74.0	CC	Drained with y/10
1/7/31	RED	6.99	6.34	6.34	4400	—	73.0	EB	
1/7/31	y/10	6.99	6.07	6.07	500	—	73.0	CC	
1/8/31	RED	7.00	5.97	6.59	2000	2-m	86.7	CC	
1/8/31	y/10	7.00	6.05	6.05	500	—	76.7	CC	
1/9/31	RED	7.00	4.89	8.83	3400	21-m	82.3	CC	
1/13/31	RED	7.00	5.30	8.40	4500	18-m	78.8	CC	
1/13/31	y/10	7.00	6.05	6.05	400	—	79.4	CC	
1/14/31	RED	7.01	5.49	6.03	3700	7-m	80.1	CC	
1/14/31	y/10	7.01	6.35	6.35	400	—	81.5	CC	
1/15/31	RED	7.00	5.56	8.15	2500	5-m	80.0	CC	
1/15/31	y/10	7.00	5.80	7.25	300	—	87.3	CC	100 ml 25% Sod Hyc

ASIAN CLOUDY PRODUCTIONS CHICAGO 6-4-03

Work continued to Page

SIGNATURE

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Work continued from Page

DATE	TANK	B.CCSF	PH IN	PH out	Cond	NaOH	Temp	Int'l.	Comments
1/16	RED	7.0	6.10	6.10	3000	—	78.7	CC ^{II}	Auto blowdown on
1/17	y/10	7.00	6.30	6.30	300	—	92.6	CC ^I	Boiler stuck open
1/17	RED	7.00	6.50	6.50	1200	—	90.8	CC ^{II}	
1/20	y/10	7.0	6.20	6.20	300	—	88.8	CC ^{II}	
1/20	RED	7.0	6.48	6.48	850	—	81.5	CC ^{II}	
1/21	RED	7.0	4.77	8.09	2000	12-m	81.8	EB	
1/21	y/10	7.00	6.10	6.10	100	—	91.2	CC ^{II}	
1/22	RED	6.99	5.25	8.55	1500	10-m	85.0	EB	
1/22	y/10	6.99	5.90	8.75	1400	—	91.4	EB	200 ml 25% NaHyd
1/23	RED	7.0	1.55	8.50	2400	5-m	87.5	CC ^{II}	Boiler fixed!!
1/23	y/10	7.0	1.56	7.20	400	—	89.2	CC ^{II}	200 ml 25% NaHyd
1/27	RED	7.0	1.50	6.09	3800	28-m	75.1	CC ^{II}	
1/27	y/10	7.0	1.610	6.10	500	—	78.5	CC ^{II}	
1/28	RED	7.0	1.54	6.20	3800	11-m	75.6	CC ^{II}	
1/28	y/10	7.0	1.55	6.34	500	—	78.2	CC ^{II}	200 ml 25% NaHyd
1/29	RED	7.0	1.494	6.08	3300	28-m	76.8	CC ^{II}	
1/31	RED	7.00	5.15	6.04	3500	25-m	79.4	CC ^{II}	
1/31	y/10	7.00	5.71	8.90	500	—	79.3	CC ^{II}	200 ml 25% NaHyd
2/3	RED	7.0	1.54	6.05	2500	5-m	75.0	CC ^{II}	
2/3	y/10	7.0	1.610	6.10	400	—	76.4	CC ^{II}	
2/4	RED	7.0	1.539	8.45	1800	6-m	84.9	CC ^{II}	
2/4	y/10	7.0	1.609	6.09	500	—	77.6	CC ^{II}	
2/6	RED	7.00	5.78	6.55	2000	3-m	86.3	CC ^{II}	
2/6	y/10	7.00	6.05	6.05	500	—	81.0	CC ^{II}	
2/10	RED	7.00	6.31	6.31	2600	—	80.7	CC ^{II}	
2/11	RED	7.0	1.56	6.50	2200	4-m	89.1	CC ^{II}	
2/12	y/10	7.00	6.35	6.35	400	—	76.8	CC ^{II}	
2/13	RED	7.00	5.70	7.60	2000	4-mu	91.6	CC ^{II}	
2/13	y/10	7.00	6.22	6.22	400	—	80.1	CC ^{II}	Drained with RED
2/18	RED	7.00	6.21	6.21	2300	—	80.5	CC ^{II}	
2/18	y/10	7.00	6.25	6.25	400	—	78.9	CC ^{II}	
2/19	RED	7.00	6.05	6.05	2000	—	80.5	CC ^{II}	
2/19	y/10	7.00	6.45	6.45	600	—	78.6	CC ^{II}	

Work continued to Page

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Work continued from Page

DATE	TANK	Buffer	pH IN	pH OUT	Cond	NA OH	Temp INT	Comments
2/20	RED	7.00	5.82	6.50	2000	2-m	89.4 CG	
2/20	y/0	7.00	6.43	6.43	600	—	81.7 CG	
2/21	RED	7.01	6.10	6.10	3200	—	93.0 CG	
2/21	y/0	7.00	6.05	6.05	300	—	83.4 CG	
2/25	RED	7.01	5.04	6.04	3000	12-m	77.5 CG	Drained with y/0
2/25	y/0	7.01	5.89	8.90	300	—	78.7 CG	200 ml 25% Sech
2/26	RED	7.00	5.78	6.53	3200	5-m	79.7 CG	
2/26	y/0	7.00	6.78	6.78	300	—	79.0 CG	
2/28	RED	7.00	6.06	6.06	2000	—	87.2 CG	
2/28	y/0	7.00	6.56	6.56	300	—	77.4 CG	
3/3	RED	7.00	6.40	6.40	1300	—	80.3 CG	
3/3	y/0	7.00	6.32	6.32	200	—	77.5 CG	
3/4	RED	7.00	5.06	8.71	2400	20-m	81.2 CG	
3/5	y/0	7.00	6.12	6.12	200	—	85.1 CG	
3/5	RED	7.00	5.65	6.67	2000	4-m	89.1 CG	Drained with y/0
3/7	RED	7.01	5.24	6.30	4200	17-m	82.5 CG	
3/11	RED	7.01	5.28	6.05	4400	18-m	78.2 CG	
3/11	y/0	7.00	6.12	6.12	400	—	80.6 CG	
3/12	RED	7.01	5.70	7.86	2500	6-m	77.0 EB	
3/13	RED	7.00	5.06	8.83	4500	28-m	78.6 CG	
3/13	y/0	7.00	5.78	6.45	700	—	78.1 CG	200 ml 25% Sech
3/17	RED	7.01	6.05	6.05	1800	—	75.2 CG	
3/17	y/0	7.01	6.10	6.10	500	—	74.9 CG	
3/18	RED	7.00	6.40	6.40	2000	—	77.0 CG	
3/18	y/0	7.00	6.75	6.75	600	—	78.9 CG	
3/19	y/0	7.00	6.73	8.73	600	—	79.8 CG	
3/20	y/0	7.01	6.40	6.40	600	—	79.9 CG	
3/21	RED	7.00	8.01	8.01	1800	—	83.2 CG	
3/21	y/0	7.00	7.75	7.75	1200	—	84.1 CG	
3/24	y/0	7.00	9.50	6.25	400	—	77.3 CG	ADDED 200 ml 56% Acid
3/26	y/0	7.00	7.69	7.69	500	—	78.4 CG	Aid
3/26	RED	7.00	6.55	6.55	3400	—	84.2 CG	
3/28	RED	7.00	5.33	6.74	4500	18-m	89.3 EB	

Work continued to Page

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DATE TANK BUFFER PH IN PH OUT COND NA^{OH} TEMP INTL COMMENTS

3/31	YEL	7.00	6.72	6.72	600	—	79.7	EB
4/2	RED	7.00	5.92	6.91	3500	4-m	EB	
4/2	YEL	7.01	6.50	6.50	500	—	83.7	EB
4/3	RED	7.01	5.27	6.20	3800	23-m	89.4	EB
4/3	YEL	7.00	6.45	6.45	1500	—	85.7	EB
4/4	RED	7.01	5.67	8.49	3000	15-m	91.0	EB
4/7	RED	7.01	6.14	6.14	4400	—	83.8	CG ^{II}
4/7	y/0	7.01	6.43	6.43	1200	—	82.2	CG ^{II}
4/8	RED	7.00	5.36	6.60	4400	18-m	83.0	CG ^{II}
4/10	RED	7.01	5.82	6.15	3400	5-m	95.2	CG ^{II}
4/11	RED	7.00	5.93	6.20	2500	1-m	96.6	CG ^{II}
4/11	y/0	7.00	6.58	6.58	800	—	88.1.0	CG ^{II}
4/14	y/0	7.00	6.42	6.42	600	—	88.1.8	CG ^{II}
4/16	RED	7.00	5.52	6.60	4000	16-m	84.9	CG ^{II}
4/21	y/0	7.01	6.77	6.77	500	—	82.4	CG ^{II}
4/21	RED	7.01	5.58	6.73	4800	18-m	83.6	CG ^{II}
4/22	RED	7.00	6.10	6.10	3000	—	88.1.6	CG ^{II}
4/22	y/0	7.00	6.63	6.63	500	—	88.1.2	CG ^{II}
4/28	RED	7.00	5.51	6.19	3500	5-m	78.1	CG ^{II}
4/28	y/0	7.00	6.10	6.10	400	—	83.2	CG ^{II}
4/30	RED	7.00	5.80	6.40	2500	1-Gal.	83.0	CG ^{II}
4/30	y/0	7.00	6.37	6.37	400	—	83.4	CG ^{II}
5/1	y/0	7.00	6.16	6.1	300	—	82.4	CG ^{II}
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NEW Page Started Showing 4ph Calibration

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DATE	TANK	4.0	7.0	4-7	PH-IN	PH-out	Cond.	NAOH	Temp	TEST		Comments
										INT.	INT.	
5/5	RED	4.0	7.0	6.0	6.33	6.33	3000	—	86.4	CG ^I	CG ^{II}	
5/5	y/0	4.0	7.0	6.0	6.63	6.63	300	—	84.6	CG ^I	CG ^{II}	
5/6	RED	4.01	7.01	6.80	6.10	6.10	2400	—	92.1	CG ^I	CG ^{II}	
5/6	y/0	4.01	7.01	6.01	7.00	7.00	300	—	83.2	CG ^I	CG ^{II}	
5/7	RED	4.00	6.99	5.99	5.11	7.81	4400	2-gal.	89.1	CG ^I	CG ^{II}	
5/8	y/0	4.02	7.00	6.00	6.80	6.80	400	—	85.3	CG ^I	CG ^{II}	
5/12	y/0	4.02	7.01	6.02	6.59	6.59	400	—	84.2	CG ^I	CG ^{II}	
5/12	RED	4.02	7.01	6.02	5.36	878	4400	2-gal.	89.0	CG ^I	CG ^{II}	
5/15	y/0	4.00	7.00	6.00	6.84	6.84	900	—	84.6	CG ^I	CG ^{II}	
5/15	RED	4.00	7.00	6.00	5.85	6.42	4000	1-gal.	92.0	CG ^I	CG ^{II}	
5/19	RED	4.00	7.00	6.00	6.51	6.51	2800	—	90.0	CG ^I	CG ^{II}	
5/19	y/0	4.00	7.00	6.00	6.98	6.98	600	—	86.5	CG ^I	CG ^{II}	
5/20	RED	4.00	7.00	6.00	7.30	7.30	2300	—	89.1	CG ^I	CG ^{II}	
5/20	y/0	4.00	7.00	6.00	7.04	7.04	400	—	83.3	CG ^I	CG ^{II}	
5/23	y/0	4.00	7.00	6.00	6.46	6.46	800	—	84.2	CG ^I	CG ^{II}	
5/26	RED	4.00	6.99	6.01	6.38	6.38	2300	—	88.8	CG ^I	CG ^{II}	
5/28	y/0	4.00	6.99	6.01	6.61	6.61	1000	—	87.3	CG ^I	CG ^{II}	
5/29	RED	4.01	7.01	6.01	6.44	6.44	2500	—	87.7	CG ^I	CG ^{II}	Semi-Anal
5/29	y/0	4.01	7.00	6.01	6.75	6.75	1000	—	87.5	CG ^I	CG ^{II}	test sample
5/30	RED	4.01	6.99	6.02	6.40	6.40	2500	—	93.3	CG ^I	CG ^{II}	
5/30	y/0	4.01	6.99	6.02	6.71	6.71	800	—	87.0	CG ^I	CG ^{II}	
6/2	y/0	4.01	7.01	6.02	6.82	6.82	500	—	91.3	CG ^I	CG ^{II}	
6/3	RED	4.01	7.01	6.02	7.04	7.04	2300	—	93.3	CG ^I	CG ^{II}	
6/5	y/0	4.02	7.01	6.02	6.75	6.75	400	—	86.9	CG ^I	CG ^{II}	
6/5	RED	4.02	7.01	6.02	7.09	7.09	2300	—	89.8	CG ^I	CG ^{II}	
6/9	y/0	4.02	7.00	6.02	6.31	6.31	400	—	89.2	CG ^I	CG ^{II}	
6/11	RED	4.01	7.01	6.02	6.05	6.05	2200	—	85.9	CG ^I	CG ^{II}	
6/11	y/0	4.01	7.01	6.02	6.65	6.65	300	—	90.9	CG ^I	CG ^{II}	
6/12	RED	3.99	6.99	6.01	6.04	6.04	2900	—	100.3	CG ^I	CG ^{II}	
6/17	y/0	3.98	6.98	5.98	6.62	6.62	300	—	89.0	CG ^I	CG ^{II}	
6/17	RED	3.98	6.98	5.98	6.76	6.76	2300	—	90.3	CG ^I	CG ^{II}	
6/19	y/0	4.00	7.00	6.01	6.99	6.99	300	—	87.4	CG ^I	CG ^{II}	
6/23	RED	4.00	7.01	6.01	870	870	3500	—	90.0	EB	EB	
6/23	y/0	4.00	7.00	6.01	7.26	7.26	400	—	88.3	EB	EB	

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DATE	PAN	BUFFER		PH IN	PH OUT	COND	NAOH	TEMP	BOTTLE	TEST
		4.0	7.0							
6/30	RED	4.1	7.0	6.1	6.10	6.10	3000	—	89.7	EB EB
6/30	Y10	4.1	7.0	6.1	8.30	8.30	1800	—	89.5	EB EB
7/1	Y10	4.0	7.0	6.0	7.40	7.40	700	—	87.4	EB EB
7/3	RED	4.0	7.0	6.1	6.24	6.24	4400	—	84.1	EB EB
7/3	Y10	4.0	7.0	6.1	7.06	7.06	500	—	83.8	EB EB
7/7	RED	4.0	7.0	6.02	6.94	6.94	4000	—	93.3	CG CG
7/8	Y10	4.01	7.02	6.02	6.98	6.98	400	—	88.9	CG CG
7/11	RED	3.99	7.01	6.01	6.51	6.51	2600	—	93.1	CG CG
7/11	Y10	3.99	7.01	6.01	6.94	6.94	400	—	86.9	CG CG
7/15	Y10	4.00	7.00	6.02	8.00	8.00	800	—	88.2	CG CG
7/17	Y10	4.01	7.01	6.02	7.42	7.42	500	—	88.5	CG CG
7/21	Y10	4.00	7.00	6.01	6.91	6.91	800	—	88.1	CG CG
7/21	RED	4.00	7.00	6.01	6.69	6.69	3500	—	91.3	CG CG
7/22	Y10	4.00	7.02	6.02	7.42	7.42	1200	—	92.3	CG CG
7/22	RED	4.00	7.02	6.02	7.06	7.06	3300	—	94.6	CG CG
7/23	Y10	4.00	7.01	6.01	7.98	7.98	900	—	92.2	CG CG
7/23	RED	4.00	7.01	6.01	7.59	7.59	3500	—	93.4	CG CG
7/28	Y10	3.99	6.98	6.00	7.57	7.57	600	—	87.2	CG CG
7/28	RED	3.99	6.98	6.00	6.43	6.43	4000	—	88.6	CG CG
7/30	Y10	4.00	7.02	6.02	7.17	7.17	300	—	88.5	CG CG
8/4	Y10	4.00	7.01	6.01	7.57	7.57	300	—	92.2	CG CG
8/4	RED	4.00	7.01	6.01	6.98	6.98	1000	—	91.8	CG CG
8/5	Y10	4.01	7.01	6.02	8.75	8.75	400	—	91.3	CG CG
8/6	Y10	3.99	6.99	5.98	8.30	8.30	500	—	90.1	CG CG
8/11	Y10	3.99	6.98	6.01	8.90	8.90	500	—	88.4	CG CG
8/11	RED	3.99	6.98	6.01	6.61	6.61	1800	—	91.4	CG CG
8/18	Y10	3.98	6.97	6.00	7.75	7.75	400	—	91.7	CG CG
8/18	RED	3.98	6.97	6.00	6.86	6.86	1200	—	91.6	CG CG
8/19	Y10	4.00	6.99	5.99	7.80	7.80	400	—	88.2	CG CG
8/19	RED	4.00	6.99	5.99	6.84	6.84	1200	—	89.6	CG CG
8/20	Y10	3.99	6.97	5.98	7.60	7.60	400	—	91.5	CG CG
8/20	RED	3.99	6.97	5.98	7.00	7.00	800	—	90.8	CG CG
8/23	Y10	4.00	7.01	6.02	7.40	7.40	400	—	91.0	CG CG

ALLENDALE LABORATORIES CHICAGO 60605

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WITNESS

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Int'l. Int'l. ~~Int'l.~~

Buffers

DATE	TANK	4.0	7.0	6.0	PH-IN	PH-OUT	Cond	NaOH	Temp	Sample	Tested	Comment
8/25	y/10	3.99	6.98	5.99	8.96	8.96	800	—	98.6	CO ₂	CO ₂	
8/26	y/10	3.99	6.99	6.00	6.32	6.32	500	—	99.2	CO ₂	CO ₂	
9/2	RED	4.00	7.00	6.00	7.56	7.56	2200	—	90.8	CO ₂	CO ₂	
9/2	y/10	4.00	7.00	6.00	7.22	7.22	500	—	94.2	CO ₂	CO ₂	
9/3	RED	4.01	7.00	6.02	8.48	8.48	2800	—	93.2	CO ₂	CO ₂	
9/3	y/10	4.01	7.00	6.02	7.49	7.49	500	—	92.1	CO ₂	CO ₂	
9/4	RED	4.01	7.01	6.02	8.90	8.90	3400	—	94.6	CO ₂	CO ₂	
9/4	y/10	4.01	7.01	6.02	7.76	7.76	800	—	91.3	CO ₂	CO ₂	
9/8	RED	4.01	7.02	6.02	7.06	7.06	2600	—	92.5	CO ₂	CO ₂	
9/8	y/10	4.01	7.02	6.02	7.69	7.69	600	—	92.0	CO ₂	CO ₂	
9/10	RED	4.02	7.02	6.01	6.46	6.46	1700	—	93.7	CO ₂	CO ₂	
9/10	y/10	4.00	7.00	6.01	6.85	6.85	800	—	91.2	CO ₂	CO ₂	
9/11	RED	3.99	6.98	5.98	6.40	6.40	1700	—	90.9	CO ₂	CO ₂	
9/11	y/10	3.99	6.98	5.98	6.49	6.49	700	—	88.3	CO ₂	CO ₂	
9/15	RED	4.00	7.02	6.00	6.81	6.81	1400	—	88.4	CO ₂	CO ₂	
9/15	y/10	4.00	7.02	6.00	6.53	6.53	600	—	86.0	CO ₂	CO ₂	
9/17	RED	4.01	7.03	6.01	7.18	7.18	1500	—	89.7	CO ₂	CO ₂	
9/17	y/10	4.01	7.03	6.01	6.94	6.94	500	—	85.4	CO ₂	CO ₂	
9/18	RED	3.98	7.00	5.99	6.46	6.46	1400	—	91.8	CO ₂	CO ₂	
9/18	y/10	3.98	7.00	5.99	6.91	6.91	400	—	85.3	CO ₂	CO ₂	
9/20	RED	3.99	6.98	5.99	6.66	6.66	1100	—	92.9	CO ₂	CO ₂	
9/20	y/10	3.99	6.98	5.99	6.85	6.85	400	—	86.2	CO ₂	CO ₂	
9/22	RED	4.00	6.99	5.98	6.94	6.94	1800	—	89.7	CO ₂	CO ₂	
9/22	y/10	4.00	6.99	5.98	6.83	6.83	500	—	83.8	CO ₂	CO ₂	
9/23	RED	4.00	7.03	6.01	6.58	6.58	1300	—	94.0	CO ₂	CO ₂	
9/23	y/10	4.00	7.03	6.02	6.81	6.81	400	—	95.1	CO ₂	CO ₂	
9/24	RED	4.00	7.02	6.03	8.57	8.57	1400	—	96.1	CO ₂	CO ₂	
9/24	y/10	4.00	7.02	6.03	7.44	7.44	600	—	94.4	CO ₂	CO ₂	
9/25	RED	4.00	7.02	6.01	6.74	6.74	1300	—	95.8	CO ₂	CO ₂	
9/25	y/10	4.00	7.02	6.01	7.48	7.48	600	—	93.6	CO ₂	CO ₂	
9/29	RED	4.00	7.03	6.03	7.01	7.01	1500	—	93.0	CO ₂	CO ₂	
9/29	y/10	4.00	7.03	6.03	7.43	7.43	600	—	92.2	CO ₂	CO ₂	
9/30	RED	4.00	7.03	6.04	6.92	6.92	1300	—	87.4	CO ₂	CO ₂	
9/30	y/10	4.00	7.03	6.04	6.79	6.79	500	—	85.1	CO ₂	CO ₂	

S-1000-1000

D-100

2014

Buffers

DATE	TANK	4.0	7.0	6.0	PH-IN	PH-OUT	Cond	NAOH	Temp	SAMPLE	TESTER	COMMITTEE
10/1	y10	3.99	7.02	6.02	6.71	6.71	500	—	86.9	COT	COT	
10/1	RED	3.99	7.02	6.02	6.81	6.81	1500	—	88.2	COT	COT	
10/2	y10	3.99	7.02	6.02	7.28	7.28	500	—	88.6	COT	COT	
10/2	RED	3.99	7.02	6.02	6.10	6.10	1500	—	91.8	COT	COT	
10/6	y10	3.99	7.03	6.03	6.82	6.82	400	—	84.3	COT	COT	
10/6	RED	3.99	7.03	6.03	6.18	6.18	1200	—	84.5	COT	COT	
10/7	RED	4.00	6.98	5.99	6.53	6.53	1100	—	87.6	COT	COT	
10/8	y10	4.00	6.99	5.99	6.98	6.98	400	—	88.9	COT	COT	
10/8	RED	4.00	6.99	5.99	6.52	6.52	1100	—	90.2	COT	COT	
10/9	RED	4.00	6.99	5.99	6.60	6.60	1200	—	91.3	COT	COT	
10/9	y10	4.00	6.99	5.99	7.55	7.55	400	—	87.4	COT	COT	

Information Request Pursuant to 33 U.S.D § 1381 of the Clean Water Act,
Docket No. V-W-14-308-29

Request D

A list of every Ink you produced since July 2009. Include a chemical description of each ink.

Per discussion between Duane Ness of INX and Newton Ellens of EPA, and as identified in response to request D, these are limited to records of the inks that contributed to the waste water stream under discussion.



Visual Communication Technology

INX International Ink Co.
Corporate Offices
150 N. Martingale Suite 700
Schaumburg, IL 60173
847-290-0302 Phone
8847-981-9447 Fax
www.inxinternational.com

In response to information request pursuant to 33USC 1318 of the Clean Water Act, Docket number V-W-14-308-29,

D. A list of every ink produced since July 2009 (per your conversation with Duane Ness, this is limited to the inks that contributed to the waste water stream)

INX SAP CODE and PRODUCT NAME	Pounds	# Times Made	Chemical Discription
1010138 OSF RUBINE FLUSH	742,513	106	Red concentrate in petroleum based oleo-resinous varnish
1359140 OSF LOW VOC YELLOW FLUSH	742,231	155	Yellow concentrate in petroleum based oleo-resinous varnish
1373066 OSF NEW SHEETFED PUMPABLE EP YEL FLUSH	711,714	136	Yellow concentrate in petroleum based oleo-resinous varnish
1339251 OS New Generation VP Pump.. Rubine Flush	652,290	106	Red concentrate in petroleum based oleo-resinous varnish
1267309 OSF Ft. Dearborn Pumpable Yellow Flush	608,650	135	Yellow concentrate in petroleum based oleo-resinous varnish
1373065 OSF NEW EP BLUE SHADE RUBINE FLUSH	535,034	84	Blue concentrate in petroleum based oleo-resinous varnish
1339250 OS New Generation VP Pumpable Blue Flush	371,631	68	Blue concentrate in petroleum based oleo-resinous varnish
1374640 OSF AAA Pumpable Yellow Flush	305,204	69	Red concentrate in petroleum based oleo-resinous varnish
1359139 OSF LOW VOC RUBINE FLUSH	278,553	45	Red concentrate in petroleum based oleo-resinous varnish
1203634 HWO SS PUMPABLE RUBINE FLUSH	277,046	46	Red concentrate in petroleum based oleo-resinous varnish
1232722 OSF PUMPABLE PROCESS YELLOW FLUSH	266,118	56	Yellow concentrate in petroleum based oleo-resinous varnish
1426189 OS New Generation VP Pumpable Blue Flush	256,040	48	Blue concentrate in petroleum based oleo-resinous varnish
1339252 OS New Generation Pumpable VP Yell Flush	234,698	53	Yellow concentrate in petroleum based oleo-resinous varnish
1201371 HWO C/T PUMPABLE BLUE FLUSH	224,925	42	Yellow concentrate in petroleum based oleo-resinous varnish
1428884 OSF ECOPURE PUMPABLE FLUSH BLUE	202,322	38	Blue concentrate in petroleum based oleo-resinous varnish
1373064 OSF PUMPABLE ECOPURE BLUE FLUSH	194,463	35	Blue concentrate in petroleum based oleo-resinous varnish
1441760 OSF NEW LOW VOC RUBINE FLUSH	171,818	28	Red concentrate in petroleum based oleo-resinous varnish
1206085 HWO PUMPABLE YELLOW FLUSH	163,235	34	Yellow concentrate in petroleum based oleo-resinous varnish
1200612 HWO PUMPABLE YELLOW FLUSH	156,347	29	Yellow concentrate in petroleum based oleo-resinous varnish
1000532 OSF BLUE SHADE RUBINE FLUSH	152,358	27	Red concentrate in petroleum based oleo-resinous varnish
1233014 OSF Pumpable Pro Mark Blue Flush	136,678	24	Blue concentrate in petroleum based oleo-resinous varnish
1430324 OSF Ecotech Cyan Flush	128,056	25	Blue concentrate in petroleum based oleo-resinous varnish
1222162 HWO C/T 3000 PUMPABLE YELLOW FLUSH	127,632	24	Yellow concentrate in petroleum based oleo-resinous varnish
1201613 HWO PUMPABLE BLUE DONNELLEY FLUSH	116,448	23	Blue concentrate in petroleum based oleo-resinous varnish
1405449 OSF Ecotech Cyan Flush	113,475	21	Blue concentrate in petroleum based oleo-resinous varnish
1359138 OSF LOW VOC BLUE FLUSH	88,177	16	Blue concentrate in petroleum based oleo-resinous varnish
1010114 SHEETFED W/F BLUE FLUSH	83,689	20	Blue concentrate in petroleum based oleo-resinous varnish
1263427 OSF DEL MONTE PUMPABLE YELLOW FLUSH	63,715	14	Yellow concentrate in petroleum based oleo-resinous varnish
1000584 BIOPLUS YELLOW FLUSH	57,958	15	Yellow concentrate in petroleum based oleo-resinous varnish
1206259 PUMPABLE YELLOW FLUSH	48,524	10	Yellow concentrate in petroleum based oleo-resinous varnish
1000523 OSF SPECTRASET RED FLUSH	47,420	11	Red concentrate in petroleum based oleo-resinous varnish
1263426 OSF DEL MONTE PUMPABLE BLUE FLUSH	47,101	9	Blue concentrate in petroleum based oleo-resinous varnish
1275330 OSF Pumpable Rubine Flush	38,437	6	Red concentrate in petroleum based oleo-resinous varnish
1367278 HWO COVER AAMX YELLOW FLUSH	31,233	7	Yellow concentrate in petroleum based oleo-resinous varnish
1000578 OSF YELLOW FLUSH AAMX	29,954	9	Yellow concentrate in petroleum based oleo-resinous varnish
1367279 HWO COVER RUBINE FLUSH	28,401	5	Red concentrate in petroleum based oleo-resinous varnish
1000525 OSF DIATECH RUBINE FLUSH	24,835	4	Red concentrate in petroleum based oleo-resinous varnish
1442604 OSF DEL MONTE PUMPABLE BLUE FLUSH	23,685	4	Blue concentrate in petroleum based oleo-resinous varnish
1010107 SHEETFED PROCESS BLUE FLUSH	21,990	6	Blue concentrate in petroleum based oleo-resinous varnish
1367280 HWO COVER BLUE FLUSH	21,424	4	Blue concentrate in petroleum based oleo-resinous varnish
1243399 OSF Pumpable DIATECH Blue Flush	16,585	3	Blue concentrate in petroleum based oleo-resinous varnish
1222164 HWO PUMPABLE TRANSPARENT YELLOW FLUSH	16,140	3	Yellow concentrate in petroleum based oleo-resinous varnish
1471461 OSF VISION PLUS PUMPABLE T FLUSH BLUE	15,183	3	Blue concentrate in petroleum based oleo-resinous varnish
1388881 OSF NEW EP BLUE SHADE RUBINE FLUSH	6,906	1	Red concentrate in petroleum based oleo-resinous varnish
1470375 OSF HPJ YS RUBINE FLUSH	4,767	1	Red concentrate in petroleum based oleo-resinous varnish
1267309 OSF Ft. Dearborn Pumpable Yellow Flush	4,591	1	Yellow concentrate in petroleum based oleo-resinous varnish
1210976 S/YELLOW FLUSH PUMPABLE 4223	4,234	1	Yellow concentrate in petroleum based oleo-resinous varnish
1390964 EcoTech HS Flush Yellow	3,244	5	Yellow concentrate in petroleum based oleo-resinous varnish
1390963 EcoTech HS Flush Rubine	2,893	3	Red concentrate in petroleum based oleo-resinous varnish
1471430 OSF ECOPURE HPJ PUMPABLE T FLUSH BLUE	1,800	1	Blue concentrate in petroleum based oleo-resinous varnish
1430760 EcoTech HS Flush Cyan	1,296	1	Blue concentrate in petroleum based oleo-resinous varnish
1390962 EcoTech HS Flush Cyan	1,271	2	Blue concentrate in petroleum based oleo-resinous varnish
1440148 HWO PANTONE YELLOW FLUSH	540	1	Yellow concentrate in petroleum based oleo-resinous varnish
1018069 PERMANENT FLUSH YELLOW	406	10	Yellow concentrate in petroleum based oleo-resinous varnish
	9,072,462	1,761	

Headquartered in Schaumburg, Illinois INX International Ink Co. is the third largest producer of ink in North America and a global supplier as part of Sakata INX worldwide operations. We are an industry leader offering a full line of ink and coating solutions technology for packaging and commercial print applications. Our products solutions focus on metal decorating, flexographic, gravure, web offset, lamination, corrugated, sheetfed, inkjet and UV/EB inks and coatings.



INX International Ink Co.

Information Request Pursuant to 33 U.S.D § 1381 of the Clean Water Act,
Docket No. V-W-14-308-29

Request E.

- E1 A description of the process by which you clean your ink production tanks.
Include a chemical description of any cleaning agents you use.
E2 Provide material safety data sheets (MSDS) for any cleaning agents you use.



INX International Ink Co.
Corporate Offices
150 N. Martingale Suite 700
Schaumburg, IL 60173
847-290-0302 Phone
8847-981-9447 Fax
www.inxinternational.com

In response to information request pursuant to 33USC 1318 of the Clean Water Act,
Docket number V-W-14-308-29,

E. INX West Chicago Operation Ink Tank Cleaning Process.

The large stationary tanks in which we convert press cake (pigment) to flush are not cleaned between batches since they are dedicated to a specific color. Cleaning these tanks may be done occasionally (less than once per year) by physically scrapping the inside of the tanks (following approved confined space procedures). The material removed is disposed of as solid, non-hazardous waste.

Our mobile ink tanks (tubs) are cleaned in a Mart tub washer using a heated caustic solution. The caustic used is sodium hydroxide (MSDS attached). The pH is maintained below 12. The liquid in the tub washer is occasionally allowed to settle and is decanted from the accumulated solids. The solids are disposed of in our non-hazardous solids waste stream. The decantate is put back in the tub washer and additional water and/or sodium hydroxide are added as required to maintain the pH and volume. The caustic water used in the tub washer is not combined with the process water waste stream regulated by our Waste Water Discharge Permit #1109. When the tub washer liquid needs to be disposed of, it is handled as non-hazardous liquid waste. No waste water from the tub cleaning operation goes to the WWTP.

E2

3754

Caustic Soda (used in Tub Washer)

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Caustic Soda; Caustic Soda Compounder; Caustic Soda Diaphragm Grade; Caustic Soda Rayon Grade; Caustic Soda Beads; Aluminum Etchant; Soda Lye; Caustic Soda Pels Plus

SYNONYMS: Sodium Hydroxide; Anhydrous Sodium Hydroxide, Caustic Soda; NaOH

ISSUE DATE: 08/30/2005

SUPPLIER: HARCROS CHEMICALS, INC.
5200 Speaker Road
Kansas City, KS 66106-1095

SUPPLIERS TELEPHONE NUMBER: 913-321-3131

TRANSPORTATION EMERGENCY TELEPHONE NUMBER: 1-800-424-8300

MSDS No. 105663

2. COMPOSITION/ INFORMATION ON INGREDIENTS

<u>Material/CAS Number</u>	<u>Percent</u>
Sodium Hydroxide 1310-73-2	96-100
Water 7732-18-5	balance

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

DANGER! Corrosive - Causes severe burns to eyes and skin. May cause irreversible eye damage. Inhalation of dust is highly irritating and possibly corrosive to the upper respiratory tract. Harmful or fatal if inhaled. Harmful or fatal if swallowed.

Environmental Hazard -- This product is toxic to fish. Keep out of lakes, streams, ponds, or other waters.

Precautions: Do not get in eyes, on skin, or on clothing. Corrosive to skin. Even a small amount in the eye can cause blindness. Do not breathe dust or mists from solutions. Use only with adequate ventilation. Ventilation must be sufficient to limit employee exposure to this product below permissible exposure limits. Do not swallow. When making solutions or diluting, only add caustic soda slowly to surface of cold water while stirring. Do not add to warm or hot water, a violent eruption or explosive

419 East Desoto Ave
St. Louis Mo. 63147

TRANSCHEMICAL

Customer Service: 314-231-6917
888-263-4891
Order Fax: 314-231-5851
Office: 314-231-6905
888-873-6481
Fax: 314-231-3160

Fax

To: Pam From: LORETTA
Fax: 847-969-9723 Date: 5/17/12
Phone: Pages: 7
Re: MSDS

Urgent For Review Please Comment Please Reply Please Recycle

*Comments:

HARCROS CHEMICALS, INC.
MSDS No. 105863

Caustic Soda

08/30/2005

reaction can result. Avoid contact with organic materials and concentrated acids - may cause violent reactions. Caustic soda reacts with magnesium, aluminum, zinc (galvanized), tin, chromium, brass and bronze, generating hydrogen which is explosive. Caustic soda may react with various sugars to generate carbon monoxide. Hazardous carbon monoxide gas can form upon contact with food and beverage products in enclosed vessels and can cause death. Wash thoroughly after handling. Remove and wash contaminated clothing before reuse. Do not eat, drink or smoke in work area.

4. FIRST AID MEASURES

INHALATION: Remove from area to fresh air. If symptomatic, contact a poison control center, emergency room or physician for treatment information.

EYE/SKIN CONTACT: EYE: Remove contact lens and pour a gentle stream of warm water through the affected eye for at least 15 minutes. Contact a poison control center, emergency room or physician right away as further treatment will be necessary. SKIN: Run a gentle stream of water over the affected area for 15 minutes. A mild soap may be used if available. Contact a poison control center, emergency room or physician right away as further treatment will be necessary.

INGESTION: Gently wipe or rinse the inside of the mouth with water. Sips of water may be given if person is fully conscious. Never give anything by mouth to an unconscious or convulsing person. Do Not induce vomiting. Contact a poison control center, emergency room or physician right away as further treatment will be necessary.

5. FIRE-FIGHTING MEASURES

FLASH POINT: None

EXTINGUISHING MEDIA: Not applicable.

SPECIAL FIREFIGHTING PROCEDURES: Contact with some metals (particularly magnesium, aluminum and galvanized zinc) can rapidly generate hydrogen, which is explosive. Emits toxic fumes under fire conditions. Fire-fighters must wear NIOSH approved pressure demand, self-contained breathing apparatus and full protective clothing when fighting chemical fires.

6. ACCIDENTAL RELEASE MEASURES

ACTION TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Only trained personnel equipped with NIOSH approved, full facepiece combination dust/mist respirators should be permitted in area. For dry material, use appropriate methods, shovels, brooms, and vacuums to clean up the spill. If mixed with water, or likely to become mixed with water or any liquid, dike area to contain spill. Reclaim if possible. Or, dilute spill with large amounts of water then neutralize with dilute acid. Use vacuum truck to pick up neutralized material for proper disposal. Properly neutralized liquid residues (pH 6 to 9) may be disposed of in waste water treatment facilities which allow the discharge of neutral salt solutions. After all visible traces have been removed, flush area with large amounts of water.

7. HANDLING AND STORAGE

HARGROS CHEMICALS,
MSDS No. 105663

Caustic Soda

08/30/2005

PRECAUTIONS TO BE TAKEN DURING HANDLING AND STORAGE:

Wear appropriate personal protective equipment when handling this product. Never touch eyes or face with hands or gloves that may be contaminated with this product. When making solutions or diluting, only add caustic soda slowly to surface of cold water while stirring. Do not add to warm or hot water, a violent eruption or explosive reaction can result. Avoid contact with organic materials and concentrated acids - may cause violent reactions. Caustic soda reacts with magnesium, aluminum, zinc (galvanized), tin, chromium, brass and bronze, generating hydrogen which is explosive. Caustic soda may react with various sugars to generate carbon monoxide. Hazardous carbon monoxide gas can form upon contact with food and beverage products in enclosed vessels and can cause death. Follow appropriate tank entry procedures (see ANSI Z117.1 - 2003 Safety Requirements for Confined Spaces). Do not enter a storage tank or container (truck or rail) that has contained this product, even if it appears empty. Store in a cool, dry, well-ventilated place. Store indoors. Keep container closed when not in use.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits:

8-hour Time Weighted Average (TWA); 15-minute Short-Term Exposure Limit (STEL)

OSHA: The OSHA exposure limit(s) for Sodium Hydroxide: 2 mg/m³ Ceiling.

ACGIH: The ACGIH exposure limit(s) for Sodium Hydroxide: 2 mg/m³ Ceiling.

ONTARIO: The Ontario Exposure limit(s) for Sodium Hydroxide: 2 mg/m³CEV

RESPIRATORY PROTECTION: Where the potential for exposure exists use the appropriate regulatory compliant particulate filter respirator with full facepiece. Carefully read and follow the respirator manufacturer's instructions and information.

VENTILATION: Use local exhaust sufficient to maintain dust/mist levels below permissible exposure limits.

EYE AND FACE PROTECTION: Close fitting chemical safety goggles with faceshield.

PROTECTIVE GLOVES: Nitrile, Neoprene, Natural rubber.

OTHER PROTECTIVE EQUIPMENT: Boots, aprons, or chemical suits should be used when necessary to prevent skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point:	2534°F (1390°C)
Vapor Density (Air=1):	Non-volatile
Specific Gravity (Water=1):	2.130
pH:	Strongly basic
FREEZING/MELTING POINT:	590-608°F (310-320°C)
SOLUBILITY (wt.% in water):	347g/100g water @ 100°C

HARCROS CHEMICALS, INC.
MSDS No. 105663

Caustic Soda	08/30/2005
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Bulk Density (kg/m ³):	70 lbs/cu.ft. (loose)
VOLUME % VOLATILE:	Non-volatile
VAPOR PRESSURE:	Non-volatile
Evaporation Rate:	Non-volatile
HEAT OF SOLUTION:	Exothermic
Physical State:	Solid Beads
Odor:	Odorless
COLOR:	White to Off-White

10. STABILITY AND REACTIVITY

Stability: Stable.

HAZARDOUS POLYMERIZATION: Will not occur.

INCOMPATIBILITY (CONDITIONS/MATERIALS TO AVOID):

Contact with organic materials and concentrated acids may cause violent reactions. Contact with magnesium, aluminum, galvanized zinc, tin, chromium, brass and bronze generates explosive hydrogen. Reactions with various food sugars may form carbon monoxide. Reacts exothermically on contact with water.

HAZARDOUS THERMAL DECOMPOSITION/COMBUSTION PRODUCTS:

Oxides of sodium.

11. TOXICOLOGICAL INFORMATION

ACUTE INHALATION LC50:	Corrosive
SKIN IRRITATION:	Corrosive.
EYE IRRITATION:	Corrosive.
ACUTE ORAL LD50:	Corrosive.

CARCINOGENICITY STATUS: This product is NOT listed as a carcinogen or suspected carcinogen by NTP, IARC, ACGIH, or OSHA.

MEDICAL CONDITIONS AGGRAVATED: None known.

EFFECTS OF OVEREXPOSURE:

ACUTE:

Eye/Skin: Causes severe burns to the eyes. Small quantities can result in permanent damage and/or loss of vision. For skin contact, corrosive action causes burns and frequently deep ulcerations with subsequent scarring. Prolonged contact destroys tissue. Dust or mist from solutions can cause irritant dermatitis.

Ingestion: Ingestion either in solid or liquid form can cause very serious damage to the mucous membranes or other tissues with which contact is made, and may be fatal.

HARCROS CHEMICALS, INC.
MSDS No. 105663

Caustic Soda

08/30/2005

Inhalation: Inhalation of dusts or mists can cause damage to the upper respiratory tract and to the lung tissue depending on severity of exposure. Effects can range from mild irritation of mucous membranes, severe pneumonitis and destruction of lung tissues.

CHRONIC: The effects of long-term, low level exposures to this product have not been determined. Safe handling of this material on a long-term basis should emphasize the prevention of all contact with this material to avoid any effects from repetitive acute exposures.

12. ECOLOGICAL INFORMATION**ECOTOXICOLOGICAL INFORMATION:**

240 ug/l (Bluegill) 96-hour TLM LC50. Highly toxic to aquatic life.

ENVIRONMENTAL FATE:

No data at this time.

13. DISPOSAL CONSIDERATIONS**DISPOSAL METHOD:**

Waste material must be disposed of in accordance with federal, state, provincial, and local environmental control regulations. Empty containers should be recycled or disposed of through an approved waste management facility.

14. TRANSPORT INFORMATION

Proper Shipping Name:	Sodium Hydroxide, Solid
Hazard Class:	8 (Corrosive)
UN Number:	UN1823
Packing Group:	II
USA-RQ, Hazardous Substance and Quantity: hydroxide 1310-73-2)	1000 lbs./454 kg (sodium
Marine Pollutant:	None
Additional Information:	USA Shipments Only - Hazardous Substances are regulated in the USA when shipped above their Reportable Quantity (RQ).

15. REGULATORY INFORMATION

USA TSCA: All components of this product are listed on the TSCA Inventory.

EU EINECS: All components in this product are listed on EINECS or meet the polymer definition.

CANADA DOMESTIC SUBSTANCES LIST (DSL): This product and/or all of its components are listed on the Canadian DSL.

AUSTRALIA AICS: All components of this product are listed on AICS.

KOREA ECL: All components in this product are listed on the Korean Existing Chemicals Inventory (KECI).

JAPAN MITI (ENCS): All components in this product are listed on the Japanese Existing and New Chemical Substances (ENCS) chemical inventory.

PHILIPPINES PICCS: All of the components in this product are listed on the Philippines Inventory of Chemicals and Chemical Substances (PICCS).

HARCROS CHEMICALS, INC.
MSDS No. 105663

Caustic Soda

08/30/2005

CHINA IECSC: All components of this product are listed on the Inventory of Existing Chemical Substances in China (IECSC) or otherwise exempt.

SARA TITLE III:

SARA (311, 312) Hazard Class:
Acute Health Hazard, Reactive Hazard.

SARA (313) Chemicals:

Not listed.

SARA Extremely Hazardous Substance:

Not listed.

CERCLA Hazardous Substance:

The following materials are listed as CERCLA Hazardous Substances in Table 302.4 of 40 CFR Part 302: Sodium Hydroxide (1310-73-2) RQ = 1000 lbs./454 kg.

CALIFORNIA PROPOSITION 65: Warning: This product contains a chemical(s) known to the State of California to cause cancer and birth defects or other reproductive harm.

CANADA REGULATIONS (WHMIS): Class E - Corrosive Material.

16. OTHER INFORMATION

Other Information:

NSF/ANSI Drinking Water Treatment Chemicals - Health Effects Listing - PPG Pels® Caustic Soda Beads are certified for maximum use at 100 mg/l under NSF/ANSI Standard 60.

The following has been revised since the last issue of this MSDS:

Date, Edition, Section 4 has been updated. Section 8 has been updated. Section 9 has been updated. Section 14 has been updated. Section 15 has been updated. Section 16 has been updated.

NA = Not Available



INX International Ink Co.

Information Request Pursuant to 33 U.S.D § 1381 of the Clean Water Act,
Docket No. V-W-14-308-29

Appendix A: WCO Sewer Ordinance 10/5/2006

West Chicago
City Ordinance
40 CFR 407

Sec. 18-64.2. Same—Prohibited discharge standards.

(a) *General prohibitions.* The following discharges into the city sewerage system are prohibited:

- (1) Interference;
- (2) Pass through;
- (3) Any discharge that limits sludge disposal options.

(b) *Specific prohibitions.* The following items are prohibited from discharge into the city sewage system:

(1) Any liquids, solids or gases which by reason of their nature or quantity are or may be sufficient either alone or by interaction with other substances to cause fire or be injurious or hazardous in any other way to the POTW or to the operation of the POTW, or any water streams with a closed-cup flash point of less than one hundred forty (140) degrees Fahrenheit or sixty (60) degrees centigrade using test methods specified in 40 CFR 261.21 are prohibited. At no time shall two (2) successive readings on a meter capable of reading LEL (lower explosive limit) at a point at the nearest accessible point to the POTW or at any point in the POTW be more than five (5) percent nor any single reading greater than ten (10) percent. Materials for which discharge is prohibited under this subsection include, but are not limited to, gasoline, kerosene, naphtha, benzene, toluene, xylene, ethers, alcohols, ketones, aldehydes, peroxides, chlorates, perchlorates, bromates, polychlorinated biphenyls, polybrominated biphenyls, carbides, hydrides, stoddard solvents.

(2) Solid or viscous substances which may cause obstruction to the flow in a sewer or other interference with the operation of the wastewater treatment facilities such as, but not limited to, grease, garbage with particles greater than one-half inch in any dimension, animal guts or tissues, paunch manure, bones, hair, hides or fleshings, entrails, whole blood, feathers, ashes, cinders, sand, spent lime, stone or marble dust, metal, glass, straw, shavings, grass clippings, rags, spent grains, spent hops, waste paper, wood plastics, tar, asphalt residues from refining or processing of fuel or lubricating oil, mud or glass grinding or polishing wastes, or tumbling and demurring stones.

(3) Any wastewater which will cause corrosive structural damage to the POTW, but in no case wastewater having a pH less than 6.0 or greater than 9.0.

(4) Any wastewater containing incompatible pollutants in sufficient quantity, either singly or by interaction with other pollutants, to injure or interfere with any wastewater treatment process, constitute a hazard to humans or animals, cause a violation of the water quality standards of the receiving waters of the POTW, exceed limitation set forth in a national categorical pretreatment standard (when effective) or in section 18-64.3 of this Code or create a public nuisance.

(5) Any noxious or malodorous liquids, gases, or solids which either singly or by interaction with other wastewaters are sufficient to create a public nuisance or in a quantity that may cause acute worker health and safety problems or are sufficient to prevent entry into sewers for their maintenance and repair.

(6) In no case shall a substance discharged to the POTW cause the POTW to be in noncompliance with sludge use or disposal criteria, guidelines or regulations developed under section 405 of the Act; any criteria guideline or regulations affecting sludge use or disposal developed pursuant to the RCRA, SWDA, the Clean Water Act, the Toxic Substances Control Act, the 503 Sludge Regulations; or state criteria applicable to the sludge management method being used.

- (7) Any substance which will cause the POTW to violate its NPDES permit or the receiving water quality standards.
- (8) Any wastewater having a temperature at the point of discharge to the POTW which will inhibit biological activity in the POTW treatment plant resulting in interference. In no case shall wastewater be introduced to the POTW which exceeds sixty-five (65) degrees centigrade (one hundred fifty (150) degrees Fahrenheit) at a point of entry to the system or which exceeds forty (40) degrees centigrade (one hundred four (104) degrees Fahrenheit) at the POTW treatment plant.
- (9) Any pollutants, including compatible pollutants released at a flow or pollutant concentration which [a user knows or has reason to know] will cause interference to the POTW or will pass through the POTW.
- (10) Any wastewater containing any radioactive wastes or isotopes of such half-life or concentration as may exceed limits established by state or federal regulations.
- (11) Any water or waste containing fats, wax, grease, or oils (animal, vegetable, mineral, or synthetic), whether emulsified or not, in excess of one hundred (100) mg/l or containing substances which may solidify or become viscous at temperatures between thirty-two (32) degrees Fahrenheit and one hundred fifty (150) degrees Fahrenheit, and zero (0) degrees centigrade and sixty-five (65) degrees centigrade. Any discharge of petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference is prohibited.
- (12) Any garbage that has been improperly shredded.
- (13) Any wastewater containing BOD, total solids, or suspended solids of such character and quantity that unusual attention or expense is required to handle such materials at the sewage treatment plant; provided, however, that a user may be permitted by specific, written agreement with the city, which agreement to discharge such BOD or TSS may provide for special charges, payments or provisions for treating and testing equipment.
- (14) Waters or wastes containing substances which are not amenable to treatment or reduction by the sewage treatment processes employed or are amenable to treatment only to such degree that the sewage treatment plant effluent cannot meet the requirements of other agencies having jurisdiction over discharge to the receiving waters including the NPDES permit of the city.
- (15) Any discharge exceeding the standard established in 35 Illinois Administrative Code 307.
- (16) Any slug discharged to the POTW. All categorical and noncategorical industrial users shall notify the POTW immediately of all discharges that could cause problems to the POTW, including any slug loading.
- (17) Limitations on mercury. The limitation on mercury, established 35 Illinois Administrative Code 307.103, allocated to industry shall not exceed a concentration of 0.0005 mg/l.
- (18) No waste discharged to the municipal sewer system shall contain detectable levels (defined as 0.02 mg/l) of cyanide at any time except as permitted below:
- a. Any person desiring to discharge cyanide or cyanogen compounds to the municipal sewer system shall apply for and procure approval from the city. The application shall contain sufficient information on discharge concentrations, flows, etc., to provide adequate data to enable the city and its representatives to evaluate the discharge and secure required Illinois Environmental Protection Agency approval.

b. When permitted, total cyanide shall not exceed ten (10) mg/l; provided any sample tested shall not release more than two (2) mg/l of cyanide when tested at a pH of 4.5 and at a temperature of one hundred fifty (150) degrees Fahrenheit for a period of thirty (30) minutes. Such discharges shall be permitted only when the agency has determined that no violation of the effluent criteria of 0.025 mg/l concentration (alone or in combination with other sources) will result from such discharge.

(Ord. No. 2895, § 4, 5-1-95; Ord. No. 2930, § 3, 9-5-95; Ord. No. 4207, § 2, 5-15-2000; Ord. No. 02-O-0033, § 1, 5-6-2002)

Sec. 18-64.3. Same—Maximum allowable objectionable substances.

The city will evaluate each toxic or objectionable substance on a concentration-dilution basis and will establish maximum allowable discharge concentration for each individual person, as shown on the following chart labeled Table A. The city may add, remove, or revise parameters and/or limits as required to meet regulations or to ensure POTW compliance with permit. The limits indicated in Table A are to protect against the following:

- (1) Decreased sewage plant treatment process efficiencies and degraded effluent qualities exceeding the current requirements of the regulatory agencies.
- (2) Concentrations of any toxic or objectionable substance in the sewage treatment plant effluent exceeding the current maximum limits established by the regulatory agencies for such plant effluent flows.
- (3) Any concentrations of toxic or objectionable substances in plant effluent flows which will result in concentrations of such substances in the receiving waters which will exceed the regulatory agency's maximum allowable limits for these substances in the receiving waters.
- (4) Any concentration which limits or prohibits intended sludge disposal options.

TABLE A

Maximum Allowable Objectionable Waste Which May Be Discharged into the Sanitary Sewer System

TABLE INSET:

Parameter	Limit		
pH	Not less than 6.0 nor greater than 9.0		
Temperature	150 degrees	F	
Arsenic (Total)	0.5	mg/l	
Barium (Total)	25	mg/l	
Cadmium (Total)	0.25	mg/l	
Chromium, hexavalent	1.0	mg/l	
Chromium (Total)	5.0	mg/l	
Copper (Total)	2.0	mg/l	
Cyanide (Total)	No detectable amount, or as provided in section 18-64.2		
Lead (Total)	0.5	mg/l	
Mercury (Total)	0.005	mg/l	
Phenols	0.8	mg/l	

← TEST 17

ZINC

Nickel (Total)		5.0	mg/l
Silver (Total)		0.2	mg/l
Solids, total dissolved	5000	mg/l	/500?
Zinc (Total)		5.0	mg/l
BOD (5 day))			
TSS)	See sections 18-70 and 18-70.1 for allowable limits and		
NH 3 -N)		surcharges.	

(Ord. No. 2895, § 4, 5-1-95; Ord. No. 4207, § 3, 5-15-2000; Ord. No. 4313, § 1, 8-21-2000)

Sec. 18-64.4. Same—Allocation of pollutants.

(a) The total allocation of the pollutants to each existing industry will be established for the industrial discharges of each pollutant as the number of industries is obtained by sampling and analysis and wastewater discharge permit applications are received, and with specific limitations on discharges established in the individual discharge permits. The city shall reserve the right to limit pollutants not specifically mentioned in Table A on a case-by-case basis in order to meet standards.

(b) Discharges from each separate discharge of a user, as measured under the provisions of this Code, shall not contain in excess of the permitted allocation of the pollutants based upon a twenty-four-hour composite sample, with the exception of FOG, cyanide, pH, phenols, and hexavalent chromium, which shall be measured on the basis of grab samples. All such samples shall be measured and met at the point of entry to the POTW collection system or "end of pipe" excepting those categorical standards that are required to be met at end of process as set forth in 40 CFR. All analyses shall be performed by methodology as promulgated in the most recent 40 CFR 136.

(c) The city may maintain a reserve of ten (10) percent to fifteen (15) percent of the maximum allowable influent limit of each pollutant for new industries or increase with existing industries. The city will recalculate the maximum concentrations from time to time to reflect removal credits allowed, based on using site specific data.

(Ord. No. 2895, § 4, 5-1-95; Ord. No. 2930, § 4, 9-5-95; Ord. No. 4207, § 4, 5-15-2000)

Sec. 18-69. Surcharge rate.

In the event use of the wastewater facilities by nonresidential users is determined by the city to include wastes that exceed design concentrations of average strength domestic waste, the user shall pay a surcharge plus the cost of sampling at twenty dollars (\$20.00) per sample. The surcharge per user shall be computed by the following formula:

TABLE INSET:

	S	=	V(0.0062) [A(BOD5 - 200) + B(TSS - 220) + C(NH3-N) - 15]
<i>Where:</i>			
	S	=	Amount of surcharge
	V	=	Wastewater volume in one hundred cubic feet
	(0.0062)	=	Unit weight of water $\times 10^{-6}$ per one hundred cubic feet
	A	=	Unit charge for BOD5 per pound is determined annually
	BOD5	=	Five-day biochemical oxygen demand, mg/l or other oxygen demand if the superintendent determines that BOD does not accurately reflect the characteristics of the waste
	200	=	Allowable BOD5 strength
	B	=	Unit charge for TSS per pound is determined annually
	220	=	Allowable TSS, mg/l
	C	=	Unit charge per pound of NH3-N is determined annually
	NH3-N	=	Ammonia nitrogen oxygen demand, mg/l

The concentration of wastes discharged in excess of average strength wastes shall be used for computing surcharges and shall be established by sewage flow or water metered, and waste sampling. Waste sampling and testing by an approved laboratory shall be completed by the discharger as often as may be deemed necessary by the director of public works and shall be binding as a basis for surcharge.

(Ord. No. 05-O-0009, § 1, 3-7-2005)

Sec. 18-70. Measurement of industrial waste flow and strength.

(a) *Generally.* Significant users within ninety (90) days of the date of notification by the city shall install and maintain at their expense acceptable water meters or flow metering devices and

samplers and manholes as required to determine waste characteristics discharged to the public waters.

(b) *Flow metering devices.* Flow metering devices, installed in monitoring manholes on service lines, will be required for measurement of the volume of waste discharged to the sewers when volumes cannot otherwise be determined from metered water consumption records. This determination shall be made by the city.

(c) *Waste samplers.* The user shall install and maintain waste samplers and hire an approved laboratory to complete waste testing when directed by the city. Waste sampling and testing shall be completed by the user as often as may be deemed necessary by the city. The city shall reserve the right to sample and test all users at any time and bill the users for all involved costs.

(Ord. No. 05-O-0009, § 1, 3-7-2005)